CDX-5070/5072

SERVICE MANUAL

US Model
Canadian Model
AEP Model
E Model
CDX-5070
German Model
CDX-5072

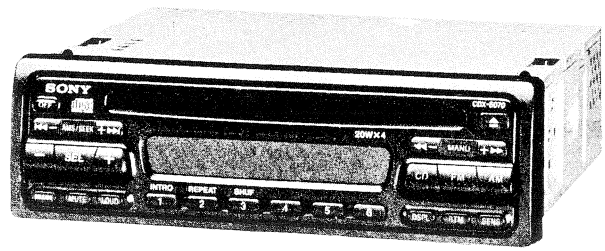

Photo: CDX-5070 US model

COMPACT disc DIGITAL AUDIO

Model Name Using Similar Mechanism	CDX-5060/5062
CD Drive Mechanism Type	MG-205X-130

SPECIFICATIONS

Power amplifier section

Outputs — Speaker outputs (sure seal connectors)
Speaker impedance — 4 – 8 ohms
Maximum power output — 20 W × 4 ch (at 4 ohms)

CD player section

System — Compact disc digital audio system
Frequency response — 10 – 20,000 Hz
Wow and flutter — Below the measurable limit
Signal-to-noise ratio — 90 dB

Tuner section

FM

Tuning range
87.5 – 107.9 MHz (at 200 kHz step) (US, Canadian Model)
87.5 – 108.0 MHz (at 50 kHz step) (AEP, E, German Model)
Antenna terminal — External antenna connector
Intermediate frequency — 10.7 MHz
Sensitivity — 8 dBf
Selectivity — 75 dB at 400 kHz
Signal-to-noise ratio — 65 dB (stereo), 70 dB (mono)
Harmonic distortion at 1 kHz — 0.5% (stereo), 0.3% (mono)
Separation — 35 dB
Frequency response — 30 – 15,000 Hz

MW

Tuning range
530 – 1,710 kHz (at 10 kHz atep) (US, Canadian Model)
530 – 1,620 kHz (at 10 kHz step) (E Model)
531 – 1,602 kHz (at 9 kHz step) (AEP, E, German Model)
Antenna terminal — External antenna connector
Intermediate frequency — 10.71 MHz/450 kHz
Sensitivity — 30 µV
Signal-to-noise ratio — 55 dB
Harmonic distortion at 1 kHz — 0.3%

LW (CDX-5070: AEP Model)

Tuning range — 153 – 281 kHz
Antenna terminal — External antenna connector
Intermediate frequency — 10.71 MHz/450 kHz
Sensitivity — 50 µV
Signal-to-noise ratio — 55 dB
Harmonic distortion at 1 kHz — 0.3%

– Continued on next page –

CDX-5070
FM/MW/LW COMPACT DISC PLAYER
CDX-5072
FM/MW/SW COMPACT DISC PLAYER

SONY®

MICROFILM

SW (CDX-5072: German Model)

Tuning range	5,950 – 6,205 kHz
Antenna terminal	External antenna connector
Intermediate frequency	10.71 MHz/450 kHz
Sensitivity	50 μV
Signal-to-noise ratio	55 dB
Harmonic distortion at 1 kHz	0.3%

General

Tone controls	Bass ± 8 dB at 100 Hz Treble ± 8 dB at 10 kHz
Power requirements	12 V DC car battery (negative ground)
Current drain	1 A (CD play) 1.5 A (during disc loading or eject)
Operating temperature	–10°C to 50°C
Dimensions	Approx. 186 × 57 × 172 mm (w/h/d) not incl. projecting parts and controls
Mass	Approx. 1.5 kg
Supplied accessories	Mounting hardware (1 set) Power connecting cord (1) Front panel case (1)

Design and specifications subject to change without notice.

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SERVICING NOTES

Laser Diode Properties

- Material: GaAlAs
- Wavelength: 780 nm
- Emission Duration: continuous
- Laser Output Power: less than 44.6 μW*

  * This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

SAFETY-RELATED COMPONENT WARNING!!

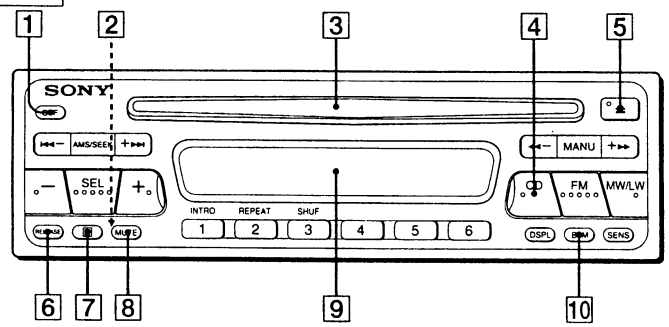
COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

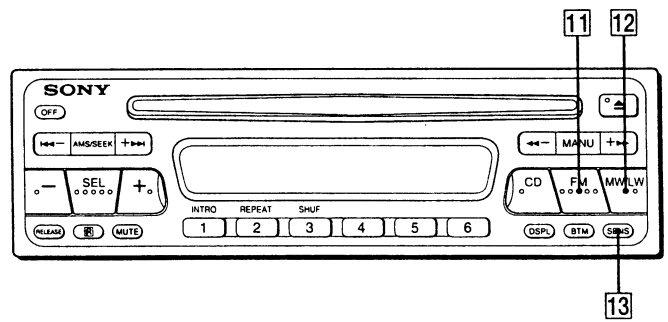
ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

Location and Function of Controls

Main Unit





Refer to the pages in ● for details.

1 **OFF button**
Press to turn off the unit.

2 **Reset button (located on the front side of the unit hidden by the front panel)**
Press this button when you use this unit for the first time, when you have changed the car battery, or when the buttons of this unit do not function. Note that when the button is pressed, the memories on the preset number buttons will be erased.

3 **Disc Insertion slot**

4 **CD (disc play) button** ⓭

5 **⏏ (eject) button** ⓭

6 **RELEASE (front panel release) button** ⓫

7 **Receptor (for the wireless remmote commander)** (CDX-5270/5272)
MUTE button (CDX-5070/5072)
Press to mute the sound momentarily. Press again to restore the previous volume level. This button will also be canceled in the following cases:
— when the [+] or OFF button is pressed
— when the ignition key of your car has been turned to the OFF position for more than ten seconds.

8 **MUTE button** (CDX-5270/5272)
LOUD (loudness) button (CDX-5070/5072)
Press to reinforce the bass and treble especially when listening at a low volume level. To cancel the mode, press it again.

9 **Display window**

10 **BTM (best tuning memory) button** ⓰

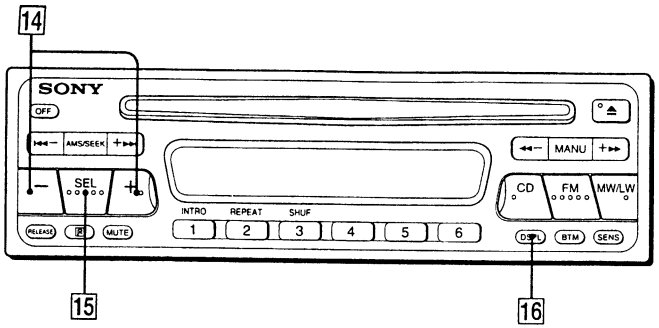
11 **FM (radio on/band select) button** (CDX-5070/5270) ⓯
At each pressing, the button changes the band cyclically as follows:
FM1→ FM2→ FM3

SDK (traffic announcement) button (CDX-5072/5272) ⓲

12 **MW/LW (radio on/band select) button** (CDX-5070/5270) ⓯
At each pressing, the button changes the band as follows:
MW ⟷ LW

TUNER (radio on/band select) button (CDX-5072/5272) ⓯
At each pressing, the button changes the band cyclically as follows:
FM1→ FM2→ FM3→ MW→ SW→ FM1

13 **SENS (sensitivity) button** (CDX-5070/5072) ⓯
SENS (sensitivity/loudness) button (CDX-5270/5272) ⓯
Press for more than two seconds to reinforce the bass and treble especially when listening at a low volume level. To disengage the button, press it again for more than two seconds. (Loudness function).



14 [−] [+] (volume/bass/treble/balance/fader control) buttons
Press to adjust each mode.

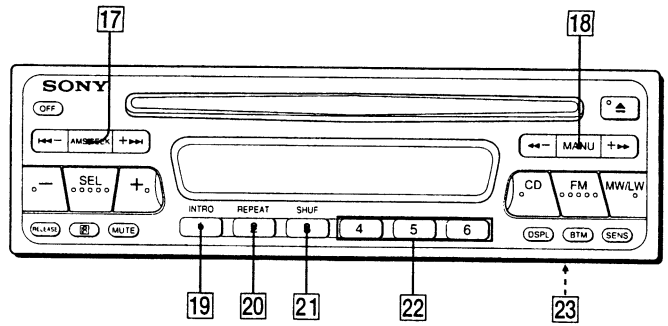
15 SEL (control mode select) button
Press to select the desired control mode: BAS (bass), TRE (treble), BAL (balance), FAD (fader) or VOL (volume).

16 DSPL (display change/time set) button ⓬
At each pressing, the button changes the display modes as follows:

During CD play	During radio reception
Elapsed playing time/track number ⟷ Clock	Frequency ⟷ Clock

Display window	Control mode	Press [−]	Press [+]
BAS	Bass control	For less bass	For more bass
TRE	Treble control	For less treble	For more treble
BAL	Balance control	To decrease the right-speakers' volume	To decrease the left-speakers' volume
FAD	Fader control	To decrease the rear-speakers' volume	To decrease the front-speakers' volume
VOL	Volume control	For less volume	For more volume

These [−] [+] buttons normally function as the volume control. Adjust the level within three seconds after selecting the desired control mode with the SEL button. Otherwise, the mode will go back to the volume control mode.



		During CD play	During radio reception
17	**AMS/SEEK button** [◀◀− AMS/SEEK +▶▶]	**AMS (Automatic Music Sensor) function** ◀◀: Press once to locate the beginning of the track being played. ▶▶: Press once to locate the beginning of the next track. Press repeatedly to locate previous or succeeding tracks.	**Automatic tuning ⓯**
18	**MANU button** [◀◀− MANU +▶▶]	**Manual search** ◀◀: Keep pressed to go back at high speed. ▶▶: Keep pressed to go ahead at high speed.	**Manual tuning ⓯**
19	**INTRO button** [INTRO 1]	**Intro scan ⓮**	**Preset number buttons ⓱**
20	**REPEAT button** [REPEAT 2]	**Repeat play ⓮**	
21	**SHUF button** [SHUF 3]	**Shuffle play ⓮**	
22	[4] [5] [6]	–	

23 POWER SELECT switch (located on the bottom of the unit)
See "POWER SELECT Switch" in the installation/connections manual.

Changing the illumination color (CDX-5270/5272)

Press the [INTRO 1] button while pressing the SEL button.

Muting the beep tone

Press the [6] button while pressing the SEL button. To obtain the beep tone again, press these buttons once more.

Connections | Connexions | Anschluß | Collegamenti

Caution

- This unit is designed for negative ground 12 V DC operation only.
- Before making connections, disconnect the ground terminal of the car battery to avoid short circuits.
- Connect the **yellow** and **red** power input leads only after all other leads have been connected.
- Be sure to connect the red power input lead to the positive 12 V power terminal which is energized when the ignition key is in the accessory position.
- **Run all ground wires to a common ground point.**

Précautions

- Cet appareil est conçu pour fonctionner sur courant continu de 12 V avec masse négative.
- Avant d'effectuer les connexions, débrancher la borne de terre de la batterie du véhicule pour éviter tout court-circuit.
- Branchez les fils d'entrée d'alimentation **jaune** et **rouge** seulement après avoir terminé tous les autres branchements.
- Veillez à ne pas raccorder le fil rouge d'entrée d'alimentation à la borne positive de 12 V qui est alimentée quand la clé de contact est sur la position accessoire.
- **Rassembler tous les fils de terre en un point de masse commun.**

Vorsicht

- Dieses Gerät ist ausschließlich für eine negativ geerdete 12-V-Autobatterie bestimmt.
- Trennen Sie vor dem Anschließen des Geräts die Erdungsklemme der Batterie ab, um einen Kurzschluß zu vermeiden.
- Schließen Sie das **gelbe** und **rote** Stromversorgungskabel erst an, wenn alle anderen Kabel bereits angeschlossen sind.
- Leiten Sie das rote Stromversorgungskabel an einen positiven 12-V-Kontakt des Bordnetzes, der in der Zubehörposition des Zündschlosses unter Strom steht.
- **Leiten Sie alle Erdungskabel an einen gemeinsamen Massepunkt ab.**

Attenzione

- Questo apparecchio è stato progettato per l'uso solo in funzionamento a 12 V CC con massa negativa.
- Prima di eseguire i collegamenti, scollegare il terminale di massa della batteria dell'auto per evitare cortocircuiti.
- Collegare i cavi di collegamento alimentazione **rosso** e **giallo** solo dopo aver collegato tutti gli altri cavi.
- Assicurarsi di collegare il cavo rosso di collegamento alimentazione al terminale di alimentazione 12 V positivo che è sotto tensione quando la chiavetta di accensione è in posizione accessoria.
- **Portare tutti i cavi di massa a un punto di massa comune.**

When the Unit is Used in a Car with No Accessory Position on the Ignition Key

— POWER SELECT Switch

The illumination on the front panel is factory-set to be turned on even when the unit is not being played. However, this setting may cause some car battery wear **if the unit is used in a car with no accessory position on the ignition key.** To avoid this battery wear when using the unit in such a car, **set the POWER SELECT switch located on the bottom of the unit to the OFF position, then press the reset button.** The illumination is reset to stay off while the unit is not being played.

Note

The caution alarm for the front panel is not activated when the POWER SELECT switch is set to the OFF position.

Si l'appareil est utilisé dans une voiture dont la clé de contact n'a pas de position accessoire

— Interrupteur POWER SELECT

L'éclairage du panneau avant est reglé en usine de manière à s'allumer même quand l'appareil ne fonctionne pas. Cependant, ce réglage risque d'épuiser la batterie **si l'appareil est utilisé dans une voiture dont la clé de contact ne possède pas de position accessoire.** Pour éviter d'épuiser la batterie, régler l'interrupteur **POWER sur le socle de l'appareil sur OFF, puis appuyer sur la touche de réinitialisation.** L'éclairage est reglé pour rester éteint quand l'appareil n'est pas utilisé.

Remarque

Quand l'interrupteur POWER SELECT est reglé sur OFF, l'avertisseur du panneau avant ne fonctionne pas.

Wenn das Zündschloß Ihres Wagens keine Zubehörposition besitzt

— POWER SELECT-Schalter

Das Gerät ist werksseitig so voreingestellt, daß das Bedienungspult auch dann beleuchtet ist, wenn das Gerät nicht betrieben wird. Besitzt das Zündschloß Ihres Fahrzeugs **keine Zubehörposition, so ist die Beleuchtung ständig eingeschaltet** und entzieht der Batterie Strom. Stellen Sie in einem solchen Fall **den POWER SELECT-Schalter an der Unterseite des Geräts auf OFF, und drücken Sie dann die Rückstelltaste.** Bei ausgeschaltetem Gerät ist das Bedienungspult dann nicht mehr beleuchtet.

Hinweis

Der Warnton ertönt nicht, wenn der POWER SELECT-Schalter auf OFF gestellt ist.

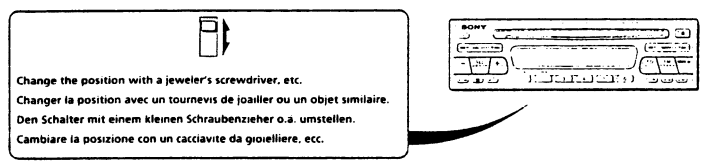
Quando si usa l'apparecchio in un'auto priva di posizione accessoria per la chiavetta di accensione

— Interruttore POWER SELECT

L'illuminazione del pannello anteriore è stata predisposta in fabbrica per l'attivazione anche quando non si usa l'apparecchio. Tuttavia questa regolazione può causare scaricamento della batteria dell'auto **se si usa l'apparecchio in un'auto priva di posizione accessoria per la chiavetta di accensione.** Per evitare lo scaricamento della batteria quando si usa l'apparecchio in questo tipo di auto, **regolare su OFF l'interruttore POWER SELECT situato sul fondo e quindi premere il puisante di azzeramento.** L'illuminazione viene così regolata per lo spegnimento quando non si usa l'apparecchio.

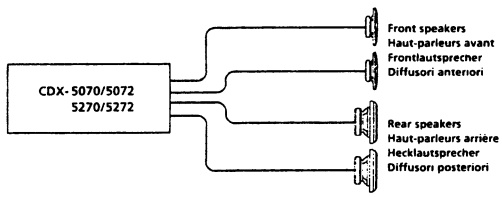
Nota

La suoneria di avvertimento per il pannello anteriore non si attiva quando l'interruttore POWER SELECT è regolato sulla posizione OFF.

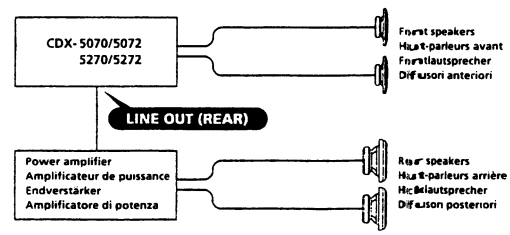

Change the position with a jeweler's screwdriver, etc.
Changer la position avec un tournevis de joaillier ou un objet similaire.
Den Schalter mit einem kleinen Schraubenzieher o.ä. umstellen.
Cambiare la posizione con un cacciavite da gioielliere, ecc.

Connection Diagram | Schémas de connexion | Anschlußdiagramm | Schema di collegamento

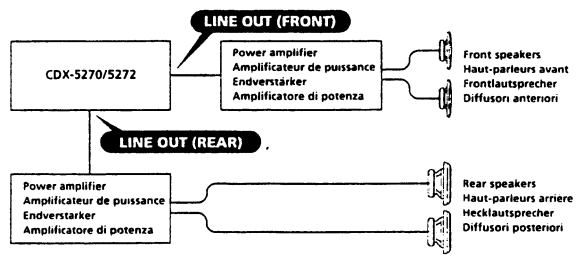
Example 1
Exemple 1
Beispiel 1
Esempio 1



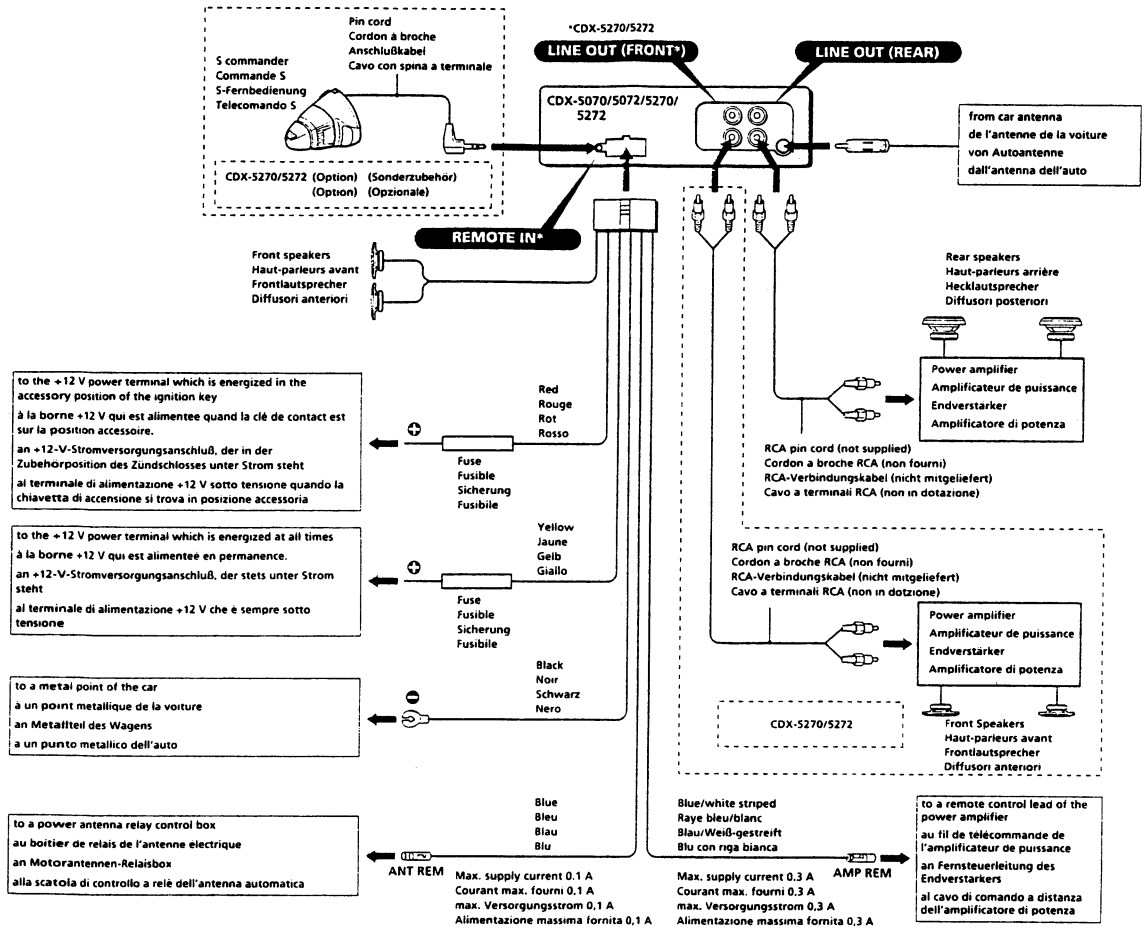
Example 2
Exemple 2
Beispiel 2
Esempio 2



Example 3 (CDX-5270/5272)
Exemple 3
Beispiel 3
Esempio 3



Connections of Example — Connexions de l'exemple — Anschlußbeispiel — Collegamenti per l'esempio



Notes on the control leads
- The power antenna control lead (blue) supplies +12 V DC when you turn on the tuner.
- A power antenna without relay box cannot be used with this unit.

Memory hold connection
When the yellow power input lead is connected, power will always be supplied to the memory circuit even when the ignition key is turned off.

Remarques sur les fils de contrôle
- Le fil de contrôle de l'antenne électrique (bleu) fournit un courant continu de +12 V quand le tuner est allumé.
- Une antenne électrique sans boîtier de relais ne peut pas être utilisée avec cet appareil.

Connexion pour la conservation de la mémoire
Lorsque le fil d'entrée d'alimentation jaune est connecté, le circuit de la mémoire est alimenté en permanence même si la clé de contact est sur la position d'arrêt.

Hinweise zu den Steuerleitungen
- Die Motorantennen-Steuerleitung (blau) liegt auf +12 V Gleichspannung, wenn der Tuner eingeschaltet wird.
- Eine Motorantenne ohne Relaisbox kann nicht verwendet werden.

Zur Stromversorgung des Speichers
Wenn das gelbe Stromversorgungskabel angeschlossen ist, wird der Speicher stets (auch bei ausgeschaltetem Zündschloß) mit Strom versorgt.

Note sui cavi di controllo
- Il cavo di controllo dell'antenna automatica (blu) fornisce +12 V CC quando si accende il sintonizzatore.
- Non è possibile usare un antenna automatica senza la scatola a relè con questo apparecchio.

Collegamento per la conservazione della memoria
Quando il cavo di ingresso alimentazione giallo è collegato, viene sempre fornita alimentazione al circuito di memoria anche quando la chiavetta di accensione è spenta.

Reset Button

When the installation and connections are over, be sure to press the reset button with a ball-point pen etc.

Touche de réinitialisation

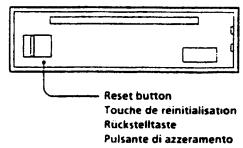
Quand l'installation et les connexions sont terminées, appuyer sur la touche de réinitialisation avec un stylo bille ou un objet pointu.

Rückstelltaste

Nach der Installation und dem Anschluß muß die Rückstelltaste mit einem Kugelschreiber o.ä. gedrückt werden.

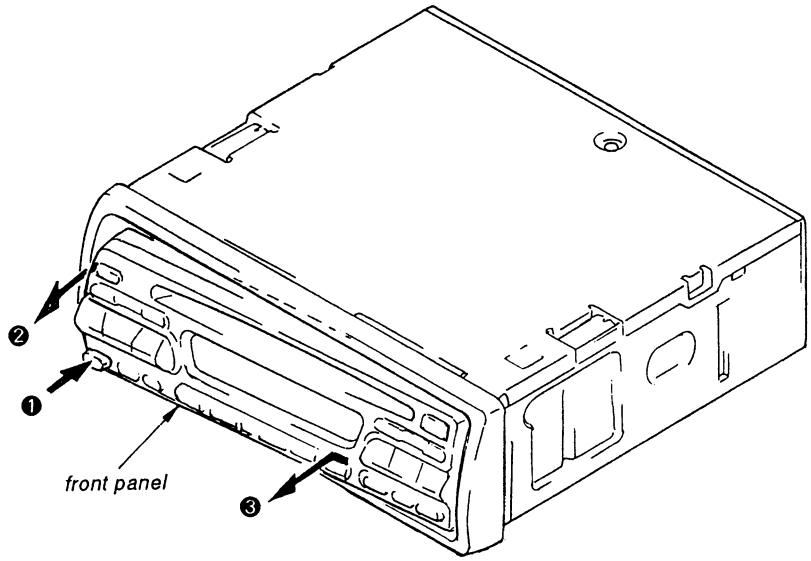
Pulsante di azzeramento

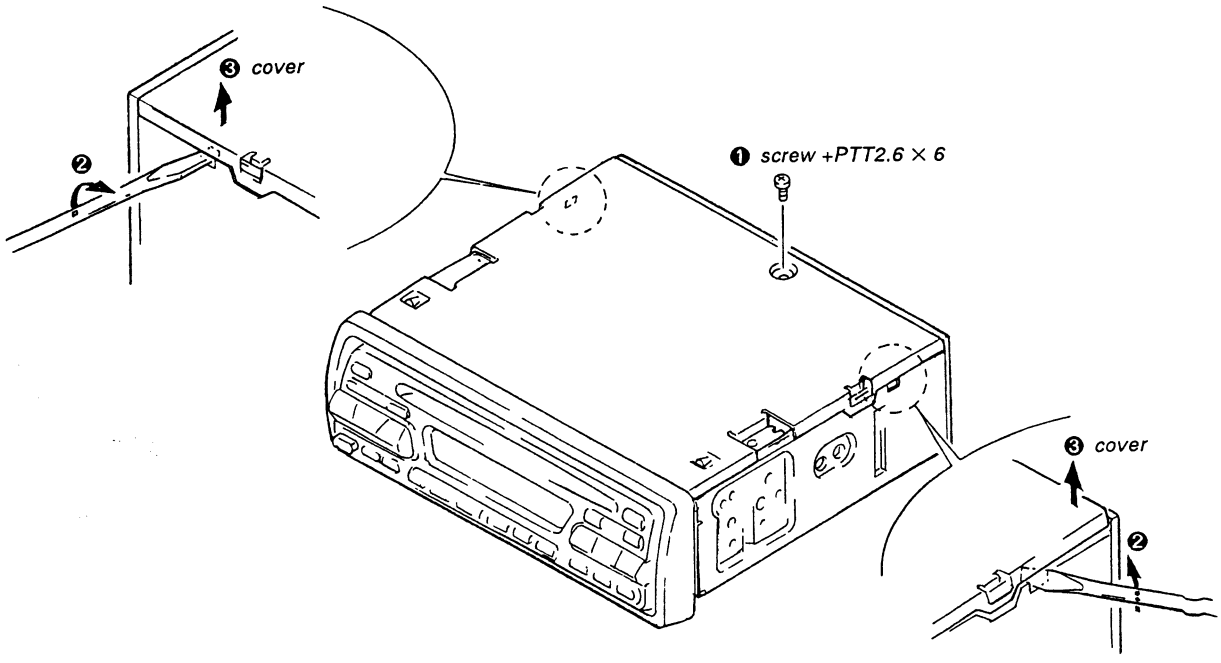
Dopo avere terminato l'installazione e i collegamenti, assicurarsi di premere il pulsante di azzeramento con la punta di una penna a sfera ecc.



SECTION 2
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.





SECTION 3
TEST MODE

Setting:

Method 1

Press keys in order of [4] → [5] → [1] for 2sec. under OFF condition.

Method 2

Pin㉗of IC501 (SYSTEM CONTROL) →Connected to GND →[RESET] button (S801)

Note: While the TEST MODE is set, the following will be displayed on the LCD.
Bit display "SHUF".

Releasing:

Press [OFF] key, or press [RESET] button (Open pin㉗ of IC501).

LCD display test

All segments of the display are lit up at the beginning of test mode.

Electronic volume test

[+] key :

→ −20dB → −10dB → 0dB →

[−] key : normal operation

[SEL] key :

→ BASS max → BASS min → TREBLE max →
← All center ← LOUD on ← TREBLE min ←

[MUTE] key :

→ BALANCE R → BALANCE L → FADER rear →
← All center ← FADAR front ←

CD SECTION

Audio Measurement Mode

When CD is played, the AUDIO MEASUREMENT MODE turns on.

When "YEDS-18" is played in the measuring mode, only the following Track No. will be played. (BANK function)

Each time the [4] key is pressed, the measuring mode turns on/off cyclically.

Note: AUDIO MEASUREMENT MODE PLAY Track No.
No. 2, 3, 6, 7, 8, 10, 12, 13, 17
(These have been set assuming that YEDS-18 will be used.)

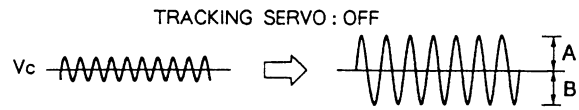
When YEDS-18 is used, the recording signals of the above tracks are as follows.

TNO	CONTENTS	EMPHASIS	PURROSE
2	1kHz Sine Wave 0dB L&R	OFF	Reference
3	20kHz Sine Wave 0dB L&R	OFF	Frequency
6	20kHz Sine Wave 0dB L&R	OFF	Modulation Noise
7	Infinity Zero −∞dB L&R	OFF	S/N
8	1kHz Sine Wave 0dB L	OFF	Channel Separation
10	1kHz Sine Wave 0dB R		
12	5kHz Sine Wave − 4.53dB L&R	ON	De emphasis
13	16kHz Sine Wave − 9.04dB L&R		
17	1kHz Sine Wave − 60dB L&R	OFF	Dynamic Range

Adjusting and Checking Functions

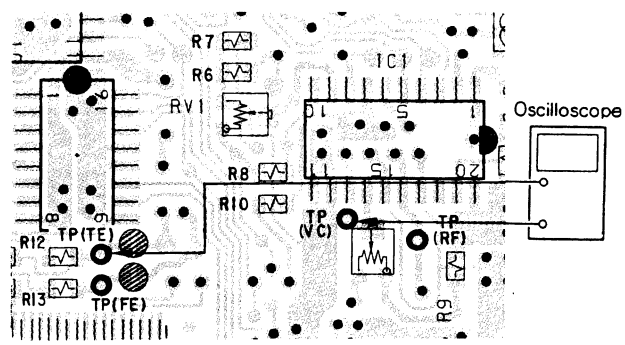
a) TRACKING OFFSET adjustment

Each time the [INTRO] key is pressed while the CD is played, the TRACKING SERVO turns on/off. The bit display "INTRO" on the LCD will be lit while the TRACKING SERVO is off.



Adjustment Location and Measurement point:

【MD BOARD】(SIDE B)



Procedure:

Adjust RV1 so that the peak values of waveforms A and B become equal.

b) Focus search retry mode
Each time the [REPEAT] key is pressed while the CD is played, the FOCUS SEARCH RETRY MODE turns on/off.
When the FOCUS does not turn on in the FOCUS SEARCH RETRY MODE, the FOCUS search is repeated. Once the FOCUS turns on, the unit sets into the PLAY condition.
During the FOCUS SEARCH RETRY MODE, the "REP" bit display on the LCD will be lit.

Note: This mode is for checking the unit when FOCUS cannot be set.

CD Error Display

During CD PLAY in the TEST MODE, the following ERROR displays will be shown when CD errors occur.
"E- n1 n2"
n1 to n2 are determined by ERROR symptoms as shown below.

n1	n2
1 : SERVO ERROR	1 : FOCUS ERROR 2 : GFS ERROR 3 : SLED MAX TIME OVER 4 : SLED OVERRUN 5 : TOC READ ERROR
3 : LOADING /EJECT ERROR	1 : MAX TIME OVER (When sensor is passed during loading.) 2 : Loading of only 8cm CD, adaptor, etc. 3 : MAX TIME OVER (Until chucking ends during loading.) 4 : MAX TIME OVER (Until EJECT ends during ejecting.)
4 : TRACK JUMP	1 : FOCUS DOWN 2 : TRACK JUMP 3 : HANG UP
D : TEMP (HOT)	0
F : MD GIVE UP	7 : EJT

TUNER SECTION

When the tuner is turned on in the TEST MODE, all bands will first be set to f_{center}.

SEEK STOP TEST Function

a) When the [SEEK +] key is pressed, the unit is set to a frequency − 10 steps from the f_{center} and automatically seeks up to the f_{center}.
- If the unit seek stops at the f_{center} :
  The unit sets into the f_{center} reception state. Preset No. "1" will be displayed.
- If the unit seeks up to the f_{center} and cannot seek stop :
  It returns to the − 10 step frequency and seeks up again.
- If the unit seek stops before the f_{center} :
  The unit receives that frequency. Preset No. "3" will be displayed.

b) When the [SEEK −] key is pressed, the unit is set to a frequency + 10 steps from the f_{center} and automatically seeks down to the f_{center}.
Hereafter the same as the [SEEK +] key.

c) When the [MANU +] key is pressed, the unit is set to a frequency − 10 steps from the f_{max} and seeks up.
Hereafter the same as a) except that f_{center} is replaced by f_{max}.

d) Press the [MANU −] key to carry out normal MANUAL search down operations.

BAND SELECT

During TEST MODE, only the single band can be selected.

AGC CUT Function

In the AM ON condition, this function activates the $\overline{SEEK}$ port (IC603) and cuts AGC.
In the AGC CUT condition, the following displays on the LCD will light up.
Bit display "BANK"

When the [BTM] key is pressed for more than two seconds, AGC CUT turns on/off cyclically.
(The BTM function is unavailable.)

Note: Set the AGC CUT condition when adjusting the AM SEEK STOP sensitivity.
If the band changes from FM to AM, be sure to turn on the AGC CUT.

SD Signal Display
(For adjusting SEEK STOP LEVEL)

If the SD signal becomes high while a certain frequency is being received, after BAND displays such as "FM", "AM", etc. are shown, the following displays will light up.

"3" display

When the SD signal is low, nothing will be shown after the BAND is displayed.

BTM Signal Level Display Function
(For adjusting FM S meter)

When the [M.SCAN] key is pressed, the level of the S meter voltage of the A/D conversion input will be displayed. (Displayed at frequency display)

* Input FM f_{center} 35 dB μ at SG, and adjust the BTM signal level displayed to 0.6.

Press MANU.+/−, etc. to return the frequency display. M.SCAN operations are unavailable.

DESTINATION	BAND	fmin	fcenter	fmax	step(SEEK)	step(MANUAL)
US, CND	FM	87.5MHz	97.9MHz	107.9MHz	200kHz	200kHz
	AM	530kHz	1,000kHz	1,710kHz	10kHz	10kHz
AEP, G	FM	87.50MHz	98.00MHz	108.00MHz	50kHz	50kHz
	MW	531kHz	999kHz	1,602kHz	9kHz	9kHz
	LW(AEP)	153kHz	216kHz	281kHz	9kHz	1kHz
	SW(G)	5,950kHz	6,080kHz	6,205kHz	5kHz	1kHz
E (9kHz step)	FM	87.50MHz	98.00MHz	108.00MHz	50kHz	50kHz
	AM	531kHz	999kHz	1,602kHz	9kHz	9kHz
E (10kHz step)	FM	87.50MHz	98.00MHz	108.00MHz	50kHz	50kHz
	AM	530kHz	1,000kHz	1,620kHz	10kHz	10kHz

Abbreviation CND : Canadian
G : German

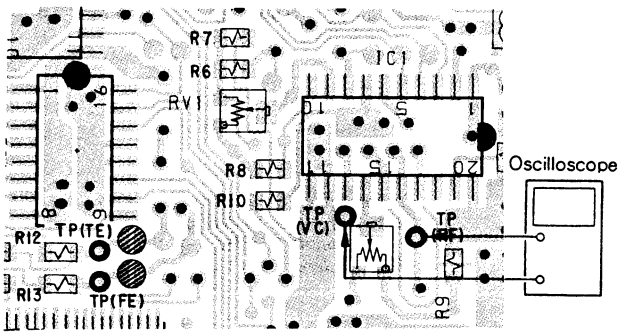
SECTION 4
ELECTRICAL ADJUSTMENTS

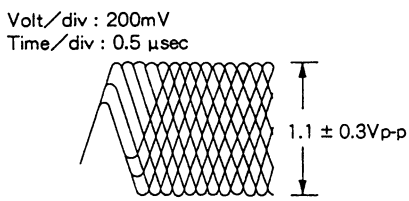
CD SECTION

Focus Offset Adjustment

Adjustment Location and Measurement point:

[MD BOARD] (SIDE B)





Procedure:

1. Connect the oscilloscope to test point [RF] on the MD board.
2. Load a disc and set mode to PLAY.
3. Adjust RV2 so that the waveform on the oscilloscope (eye pattern) is maximum with good shape. "Well-shaped eye pattern" means that the mark "◇" is clearly distinguished at the center of the waveform.

Tracking Offset Adjustment

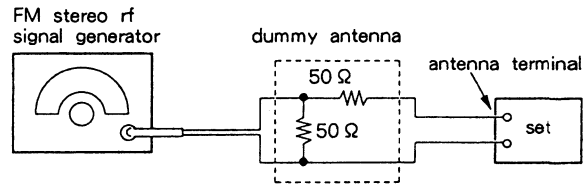
Refer to the "TEST MODE CD SECTION".

TUNER SECTION

FM Seek Stop Level Adjustment (FM SD Adjustment)

Setting:

Band : FM
Frequency : 97.9MHz (US, Canadian Model)
98MHz (E, AEP, German Model)

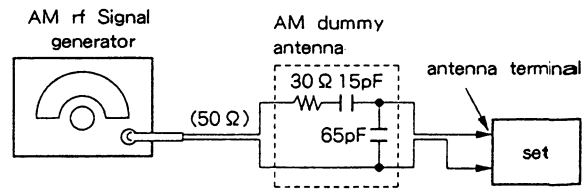


Carrier frequency : 97.9MHz (US, Canadian Model)
98MHz (E, AEP, German Model)
Modulation : 1kHz, 75kHz
Output level : 22dB (12.6 µ V)

AM Seek Stop Level Adjustment (AM SD Adjustment)

Setting:

Band : AM (MW)
Frequency : 1000kHz (US ,Canadian Model)
999kHz (E, AEP, German Model)



Carrier frequency : 1000kHz (US, Canadian Model)
999kHz (E, AEP, German Model)
Modulation : 400Hz 30 %
Output level : 32dB (40 µ V)

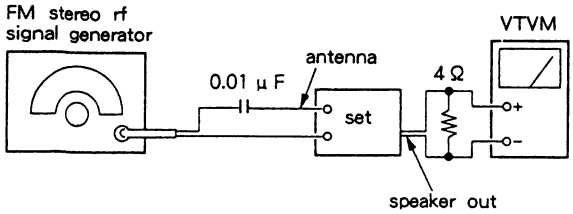
Procedure:

1. Set the "SD Signal Display" MODE of the TEST MODE.
2. Adjust RV3 (FM), RV1 (AM) of the TUNER UNIT, and erase the SD display "3" once.
3. Adjust RV3 (FM), RV1 (AM) so that a SD display lights up again.
4. Check with the "SEEK STOP TEST" function of the TEST MODE.

FM Stereo Separation Adjustment

Setting:

BAND : FM Stereo
Frequency : 97.9MHz (US, Canadian Model)
98MHz (E, AEP, German Model)



Carrier frequency : 97.9MHz (US, Canadian Model)
98MHz (E, AEP, German Model)
Modulation : Main channel : 1kHz, 33.75kHz deviation (45 %)
Pilot signal : 18kHz, 7.5kHz deviation (10 %)
Sub channel : 1kHz, 33.75kHz deviation (45 %)
Output level : 1mV (More than 35dB)

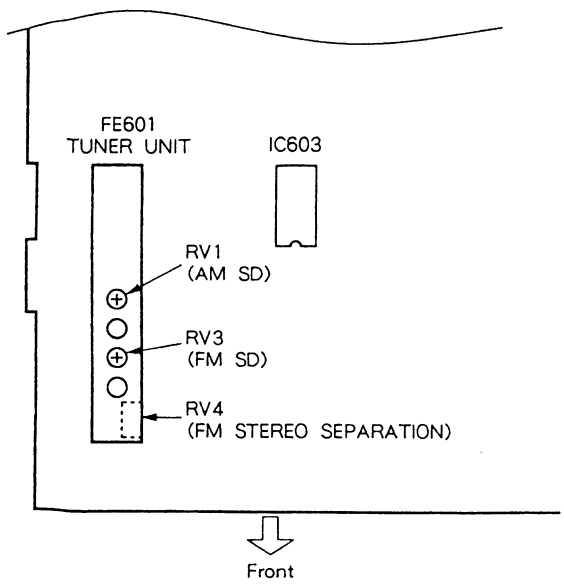
Procedure:

FM stereo signal generator output channel	VTVM connection	VTVM reading (dB)
L-CH	L-CH	ⓐ
R-CH	L-CH	ⓑ Adjust RV4 for minimum reading.
R-CH	R-CH	ⓒ
L-CH	R-CH	ⓓ Adjust RV4 for minimum reading.

Note: The separation values in the two channels should be identical.
ⓐ−ⓑ=ⓒ−ⓓ

Adjustment Location:

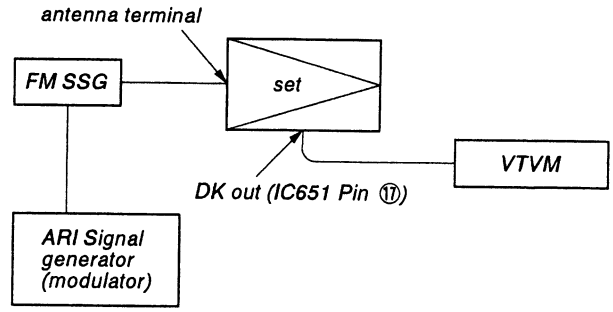
【MAIN BOARD】 (SIDE A)



ARI Level Adjustment (CDX-5072 only)

Setting:

Band switch : FM
Frequency: 98.0 MHz



Carrier frequency: 98.0 MHz
Output level: 60 dB μ V (1 mV)
Modulation: main; 1 kHz, 33.75 kHz deviation
sub; 1 kHz, 33.75 kHz deviation
19 kHz pilot; 7.5 kHz deviation
SK, BK, DK modulation

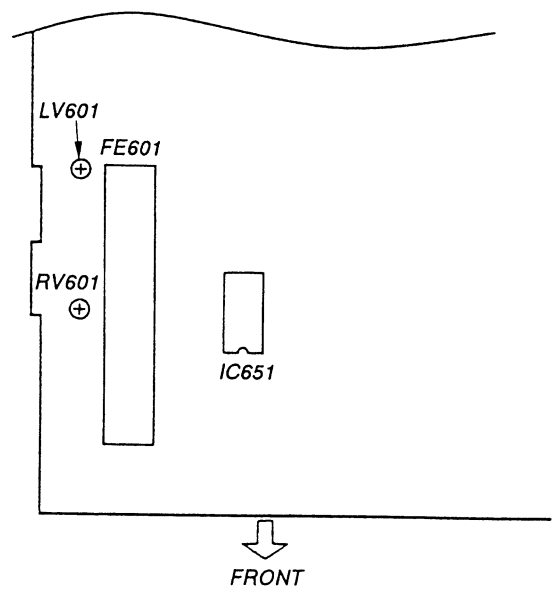
Procedure:

1. Adjust LV650 and RV601 so that the output become the maximum.

Specification: 1 Vrms or more

Adjustment Location:

【MAIN BOARD】 (SIDE A)



Pin No.	Pin Name	I / O	Description
40	SD IN	I	SD input pin.
41	$\overline{\text{NOSE SW}}$	I	Front panel Ass'y removal and attaching detection.
42	LAMP ON	O	Not used.
43	ILL ON	O	RESET output pin for UNILINK system. Illumination control output pin.
44	P ON	O	ON/OFF control pin of the power supply.
45	BEEP	O	Alarm drive output pin.
46	$\overline{\text{ACC CHECK}}$	I	ACC line ON/OFF detection.
47	DISC IN /SCOR	I	CD PLAY : SCOR input pin. Others : MD roller open/close detect input.
48	$\overline{\text{KEY ACK}}$	I	Front panel key detecton.
49	SIRCS	I	SIRCS signal input pin.
50	PLL DATA IN	I	SERIAL DATA input pin.
51	IC DATA	O	SERIAL DATA output pin for the LCD driver.
52	IC CLK	O	SERIAL CLOCK output pin for the LCD driver.
53	BU CHECK	I	BATT line ON/OFF detection.
54	Vss	–	Connected to GND.
55	XT1	–	Connected to GND.
56	XT2	–	Not used.
57	Vss	–	Connected to GND.
58	X1	–	The SYSTEM CLOCK (6.0MHz) for system control IC.
59	X2	–	
60	RESET	I	Input pin for system reset.
61	PLL CE	O	CLOCK enable output pin for the PLL IC.
62	N.C	–	Not used.
63	VOL CE	O	CE output pin to the electronic VOL IC.
64	MUTE	O	Audio MUTE output pin.
65	AD ACTIVE	O	VREF control pin of A/D conversion pins.
66	$\overline{\text{LCD INH}}$	O	Pin which outputs INH to the LCD driver IC.
67	LCD CE	O	Pin which outputs CE to the LCD driver IC.
68	COLOR	O	Output pin for switching lighting colors. (AMBER/GREEN)
69	ALARM	–	Connected to GND.
70	SENS	I	SENS input pin from CD servo IC.
71	GFS	I	GFS input pin from CD servo IC.
72	FOK	I	FOK input pin fromt CD servo IC.
73	Vss	–	Connected to GND.
74	S-METER IN	I	S meter voltage detection pin.
75	FUNCTION	I	Connected to GND.
76	MS1	I	MODE select input pin.
77	MS0	I	
78	TEMP-H	I	Temperature detection (High)
79	TEMP-L	I	Temperature detection (Low)
80	KI1	I	Key input pin (A/D conversion input)

SECTION 5
DIAGRAMS

5-1. IC PIN DESCRIPTION

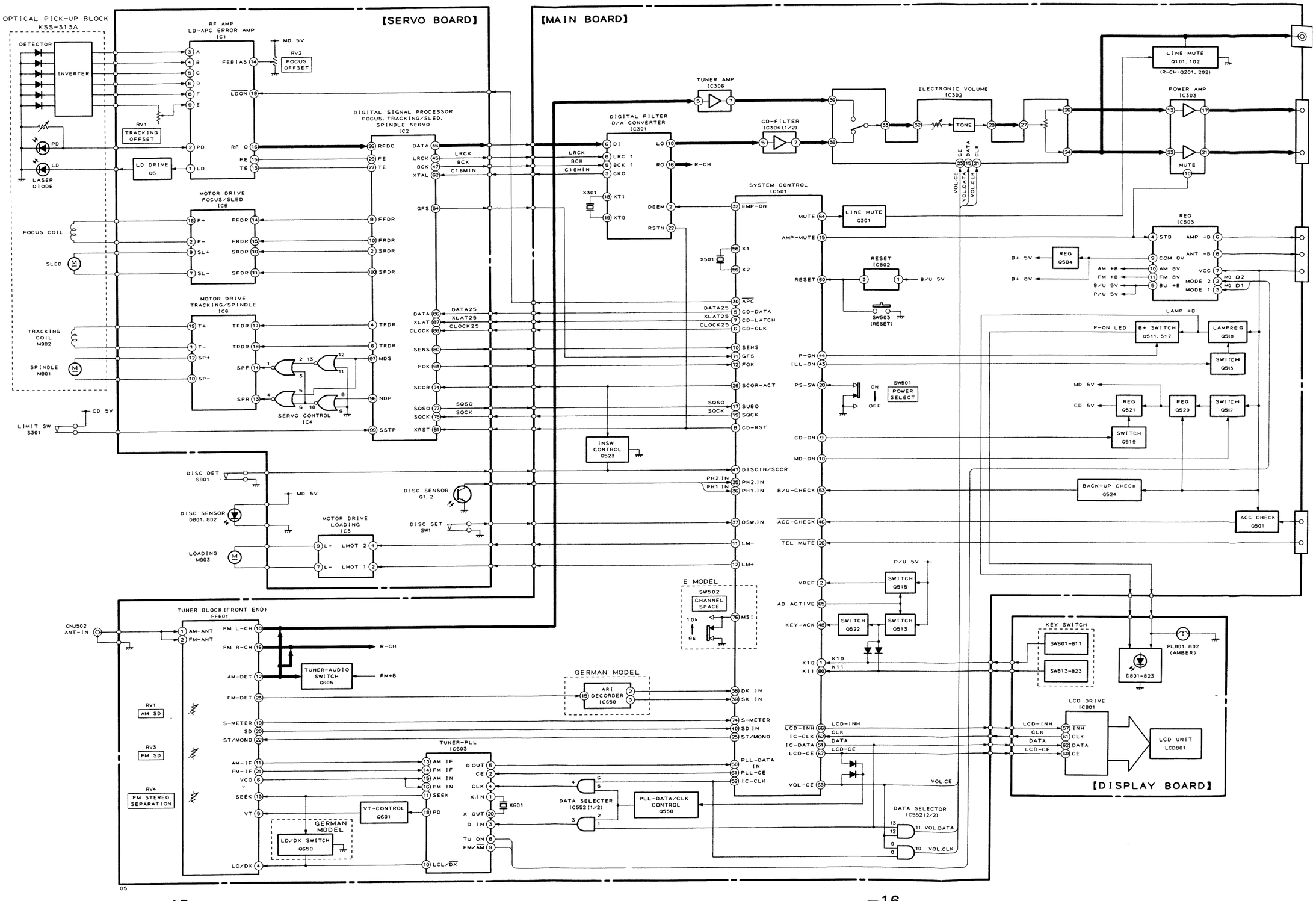
• IC501 SYSTEM CONTROL (μPD75518GF-166-3B9)

Pin No.	Pin Name	I / O	Description
1	KI0	I	Key input pin. (A/D conversion input.)
2	VREF	I	Reference voltage input pin of A/D conversion pins.
3	VDD	I	Power supply input. (5V)
4	VDD	I	
5	CD DATA	O	SERIAL DATA output pin for the CD servo IC.
6	CD CLK	O	SERIAL CLOCK output pin for the CD servo IC.
7	CD LATCH	O	SERIAL DATA LATCH output pin for the CD servo IC.
8	CD RST	O	CD servo IC resetting output pin.
9	CD ON	O	Power supply ON/OFF control output pin. (CD servo IC)
10	MD ON	O	Power supply ON/OFF control output pin. (Mechanism deck section)
11	LM −	O	Loading motor control output pins.
12	LM +		

	LM −	LM +
FWD (Loading)	L	H
REV (Eject)	H	L

13	N.C	−	Not used.
14	N.C	−	
15	AMP-CONT	O	MUTE output pin for power amp IC.
16	SCLK	O	SERIAL CLOCK output pin.
17	SUBQ	I	Q DATA input pin.
18	N.C	−	Not used.
19	SQCK	O	CLOCK output pin for reading the Q DATA.
20	SENS-KEY	−	Connected to GND.
21	N.C	−	Not used.
22	N.C	−	
23	N.C	−	
24	PLL CLK	O	SERIAL CLOCK output pin for the LCD driver.
25	ST/MONO	O	Output pin for switching control STEREO/MONO.
26	$\overline{\text{TEL MUTE}}$	I	Telephone MUTE input pin.
27	$\overline{\text{TEST}}$	I	When dropped to "L", TEST MODE will be set.
28	PS SW	I	Power select SW input pin.
29	SCOR ACT	O	Activate for SCOR line.
30	$\overline{\text{APC}}$	O	CD pick-up laser power ON/OFF control output.
31	N.C	−	Not used.
32	$\overline{\text{EMP ON}}$	O	Outputs "L" when a DISC which has been pre-emphasized is played back.
33	VSS	−	Connected GND.
34	PH4 IN	I	Not used.
35	PH2 IN	I	Mechanism deck sensor (loading/eject) input pin.
36	PH1 IN	I	Mechanism deck sensor (loading/eject) input pin.
37	DSW IN	I	Mechanism deck sensor input pin. Detects the completion of the DISC chucking operation.
38	DK IN	I	DK signal input.
39	SK IN	I	SK signal input.

5-2. BLOCK DIAGRAM



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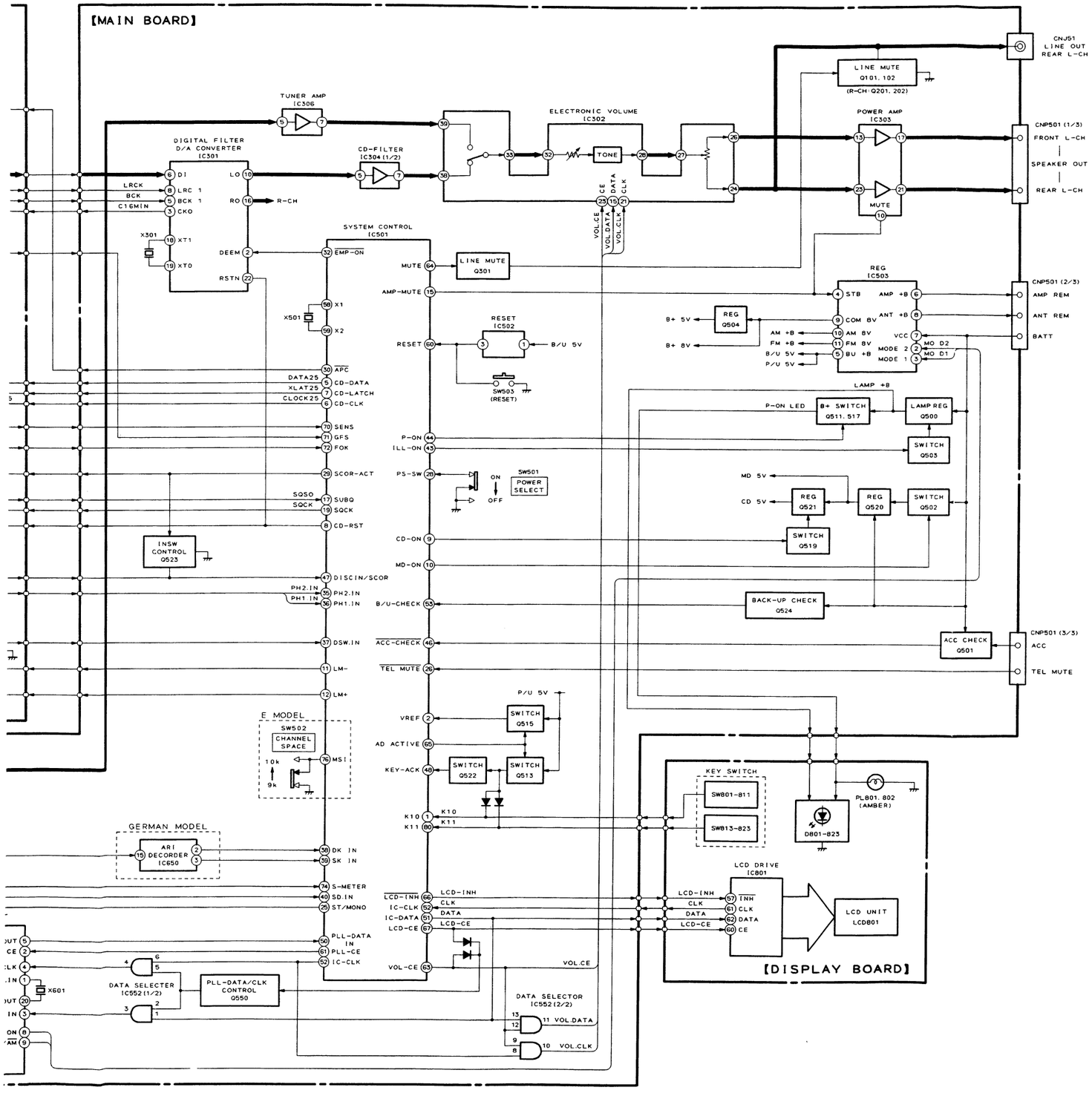

【MAIN BOARD】
CNJ51
LINE OUT
REAR L-CH
LINE MUTE
Q101, 102
(R-CH: Q201, 202)
TUNER AMP
IC306
ELECTRONIC VOLUME
IC302
POWER AMP
IC303
CNP501 (1/3)
FRONT L-CH
SPEAKER OUT
REAR L-CH
DIGITAL FILTER
D/A CONVERTER
IC301
CD-FILTER
IC304(1/2)
TONE
MUTE
SYSTEM CONTROL
IC501
LINE MUTE
Q301
REG
IC503
CNP501 (2/3)
AMP REM
ANT REM
BATT
REG
Q504
RESET
IC502
SW503
(RESET)
LAMP +B
B+ SWITCH
Q511, 517
LAMP REG
Q500
SWITCH
Q503
REG
Q521
REG
Q520
SWITCH
Q502
SWITCH
Q519
SW501
POWER
SELECT
INSW
CONTROL
Q523
BACK-UP CHECK
Q524
ACC CHECK
Q501
CNP501 (3/3)
ACC
TEL MUTE
E MODEL
SW502
CHANNEL
SPACE
SWITCH
Q515
SWITCH
Q522
SWITCH
Q513
GERMAN MODEL
ARI
DECORDER
IC650
KEY SWITCH
SW801-811
SW813-823
D801-823
PL801, 802
(AMBER)
LCD DRIVE
IC801
LCD UNIT
LCD801
【DISPLAY BOARD】
DATA SELECTER
IC552(1/2)
PLL-DATA/CLK
CONTROL
Q550
X601
DATA SELECTOR
IC552(2/2)
X301
X501
LRCK
BCK
C16MIN
R-CH
DATA2S
XLAT2S
CLOCK2S
CD-DATA
CD-LATCH
CD-CLK
SQSO
SQCK
SUBQ
SQCK
CD-RST
PH2.IN
PH1.IN
DISCIN/SCOR
DSW.IN
LM-
LM+
S-METER
SD.IN
ST/MONO
PLL-DATA
IN
PLL-CE
I2C-CLK
SENS
GFS
FOK
SCOR-ACT
P-ON
ILL-ON
PS-SW
CD-ON
MD-ON
B/U-CHECK
ACC-CHECK
TEL MUTE
VREF
AD ACTIVE
KEY-ACK
K10
K11
LCD-INH
I2C-CLK
I2C-DATA
LCD-CE
VOL-CE
VOL.CE
VOL.DATA
VOL.CLK
P-ON LED
MD 5V
CD 5V
P/U 5V
B+ 5V
B+ 8V
AM +B
FM +B
B/U 5V
P/U 5V
AMP +B
ANT +B
VCC
MODE 2
MODE 1
MO D2
MO D1
COM 8V
AM 8V
FM 8V
BU +B
ON
OFF

5-3. PRINTED WIRING BOARDS – MECHANISM DECK Section –

• See page 40 for Semiconductor Lead Layouts.

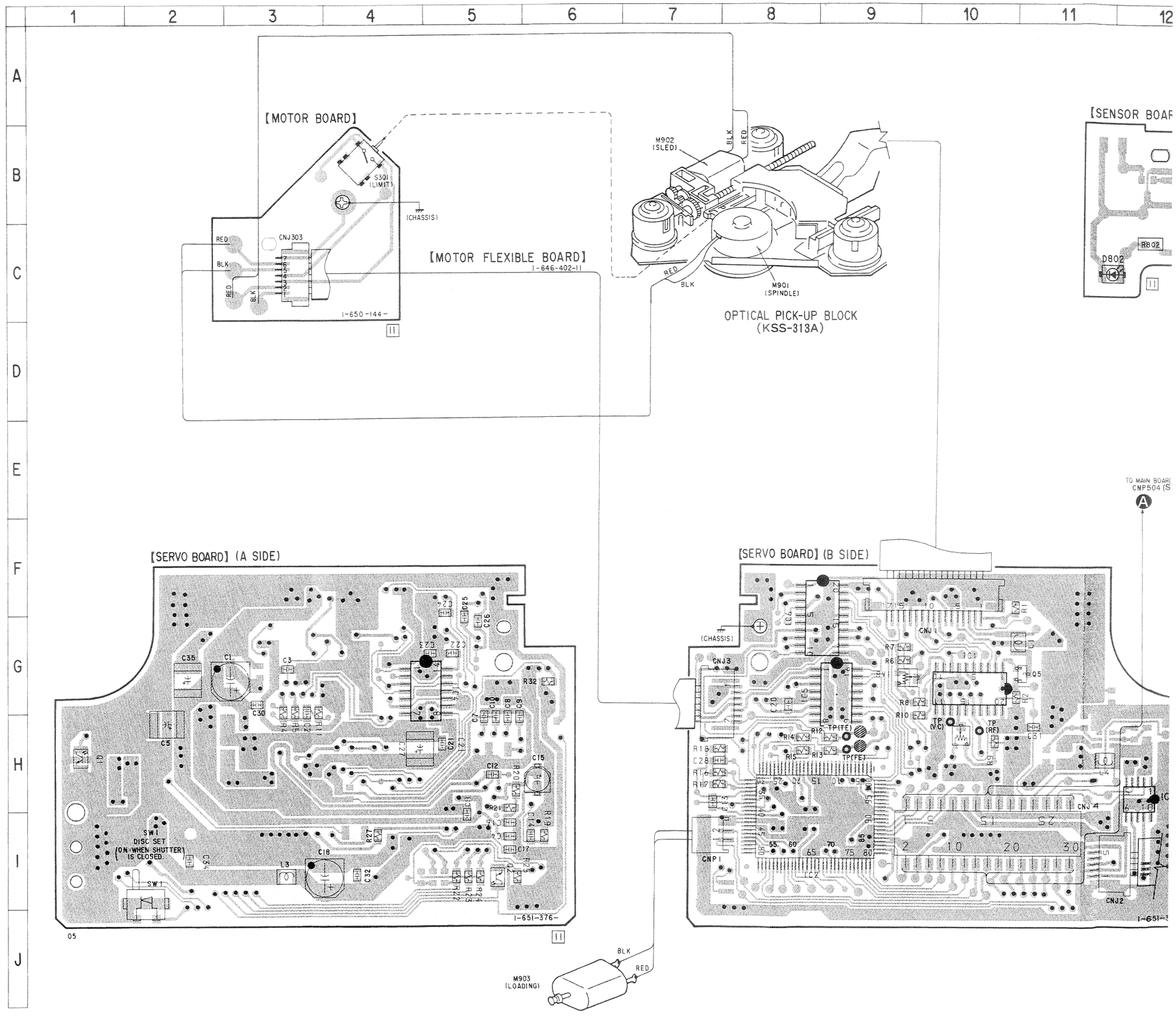
• **Semiconductor Location**

Ref. No.	Location
D801	B-16
D802	C-11
IC1	G-10
IC2	I-8
IC3	H-12
IC4	G-5
IC5	G-9
IC6	G-8
Q1	H-1
Q2	I-5
Q5	G-11

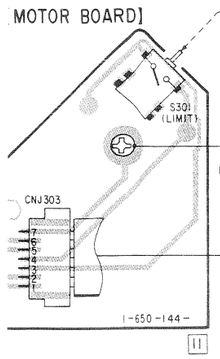
Note:

- ○——— : parts extracted from the component side.
- ● : Through hole.
- ▒▒▒ : Pattern from the side which enables seeing.

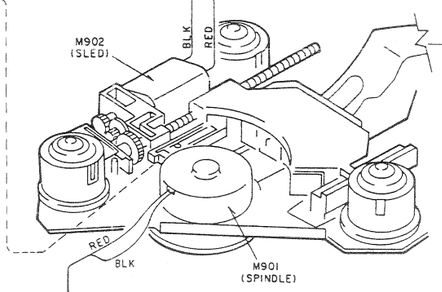
(The other layers' patterns are not indicated.)



【MOTOR BOARD】

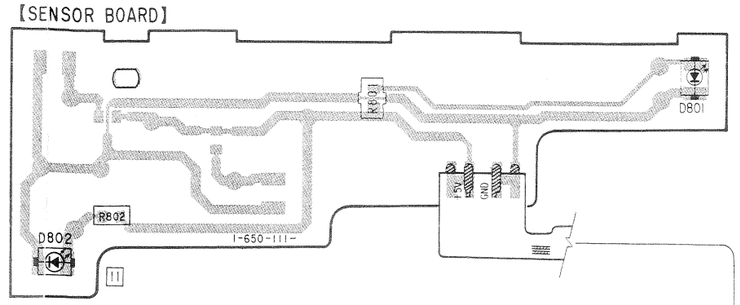


【MOTOR FLEXIBLE BOARD】
1-646-402-11



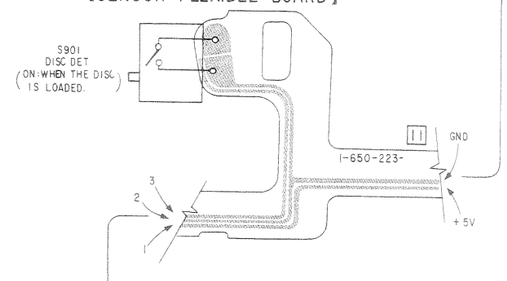
OPTICAL PICK-UP BLOCK
(KSS-313A)

【SENSOR BOARD】

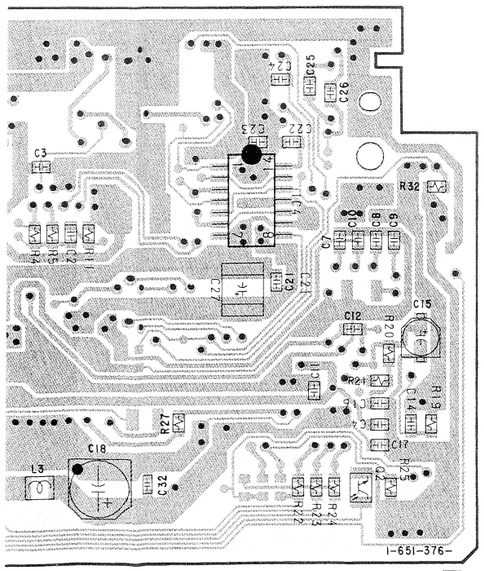


TO MAIN BOARD
CNP504 (See page 34)
A

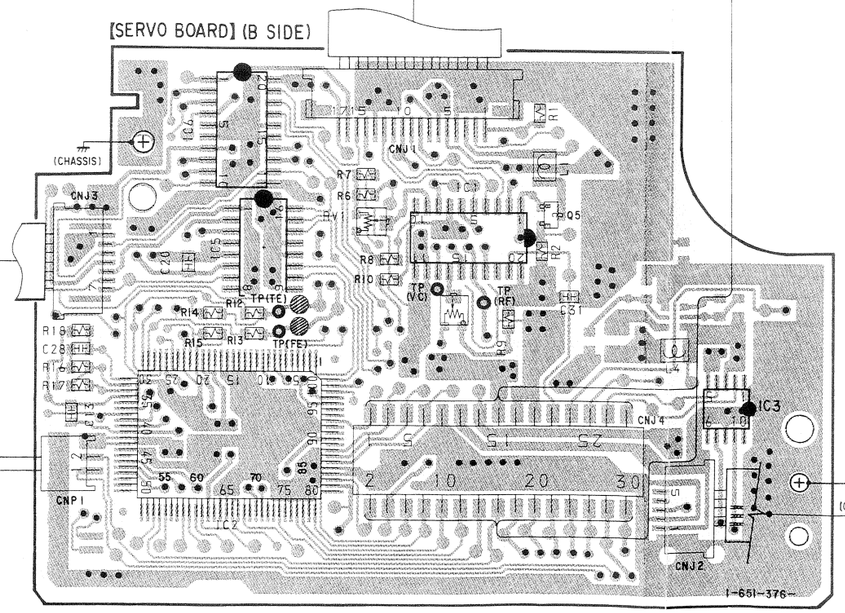
【SENSOR FLEXIBLE BOARD】

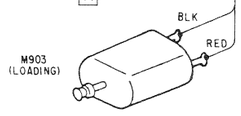


)E)



【SERVO BOARD】(B SIDE)





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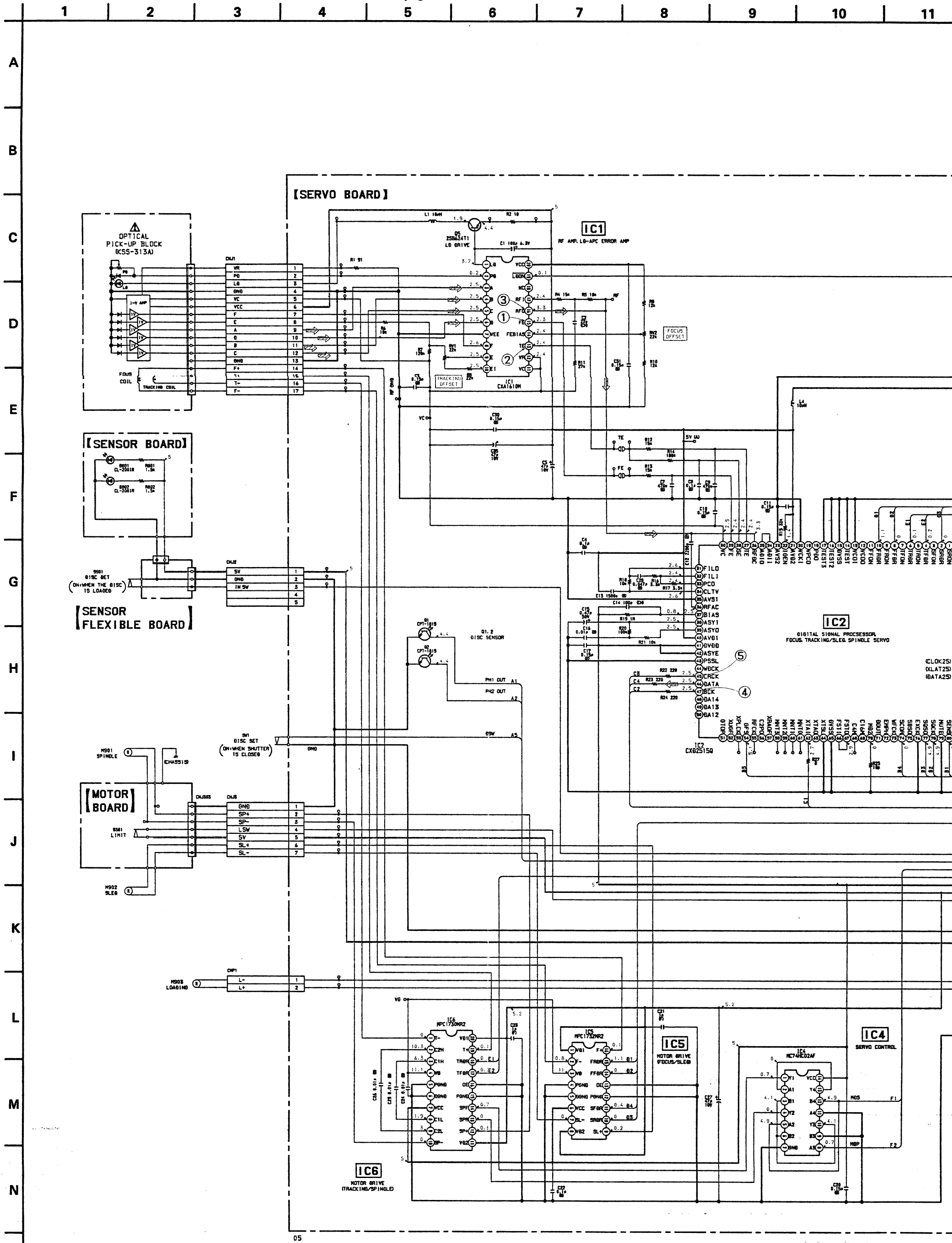
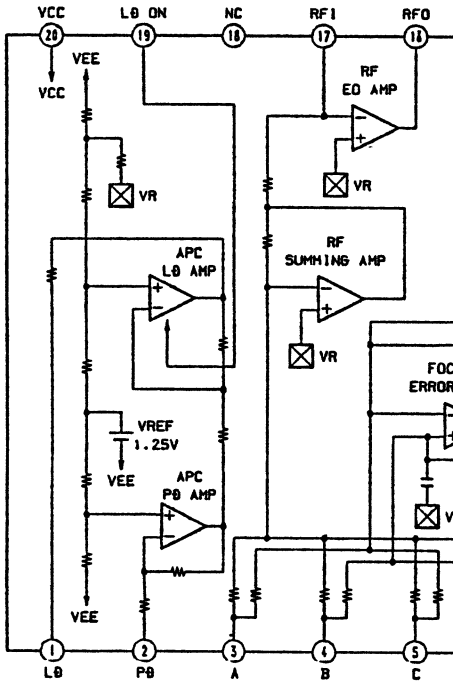
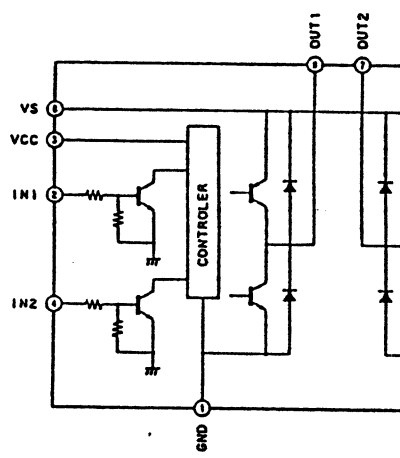

【SERVO BOARD】
OPTICAL PICK-UP BLOCK (KSS-313A)
CNJ1
IC1
RF AMP, LD-APC ERROR AMP
Q5 2SB624T1 LD DRIVE
IC1 CXA1610M
FOCUS OFFSET
TRACKING OFFSET
【SENSOR BOARD】
S901 DISC DET (ON:WHEN THE DISC IS LOADED)
【SENSOR FLEXIBLE BOARD】
CNJ2
Q1, 2 DISC SENSOR
SW1 DISC SET (ON:WHEN SHUTTER IS CLOSED)
M901 SPINDLE
M902 SLED
S901 LIMIT
M903 LOADING
【MOTOR BOARD】
CNJ5
CNJ303
CNP1
IC2 CX025150
DIGITAL SIGNAL PROCESSOR FOCUS, TRACKING/SLED, SPINDLE SERVO
IC4 SERVO CONTROL
IC4 MC74HC02AF
IC5 MOTOR DRIVE (FOCUS/SLED)
IC6 MOTOR DRIVE (TRACKING/SPINDLE)
IC4 MPC1730MR2
IC5 MPC1732MR2
(CLOK25)
(XLAT25)
(DATA25)
05

• IC Block Diagrams

IC1 CXA1610M



IC3 LB1638M



(A) TO MAIN BOARD CNP504 (See page 28)

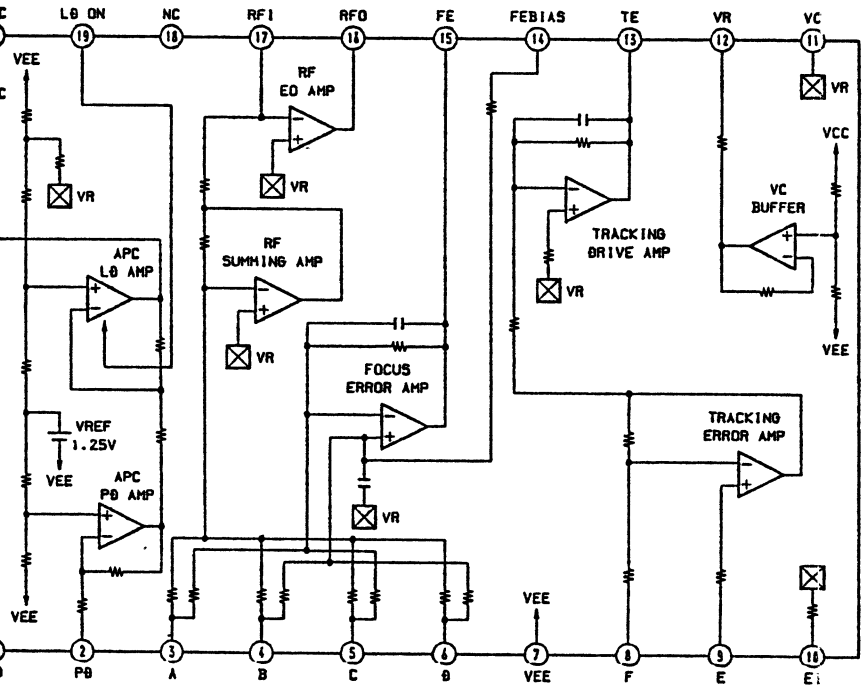
Note:

- All capacitors are in μF unless otherw
  50 WV or less are not indicated ex
  and tantalums.
- All resistors are in Ω and ¼ W or l
  specified.

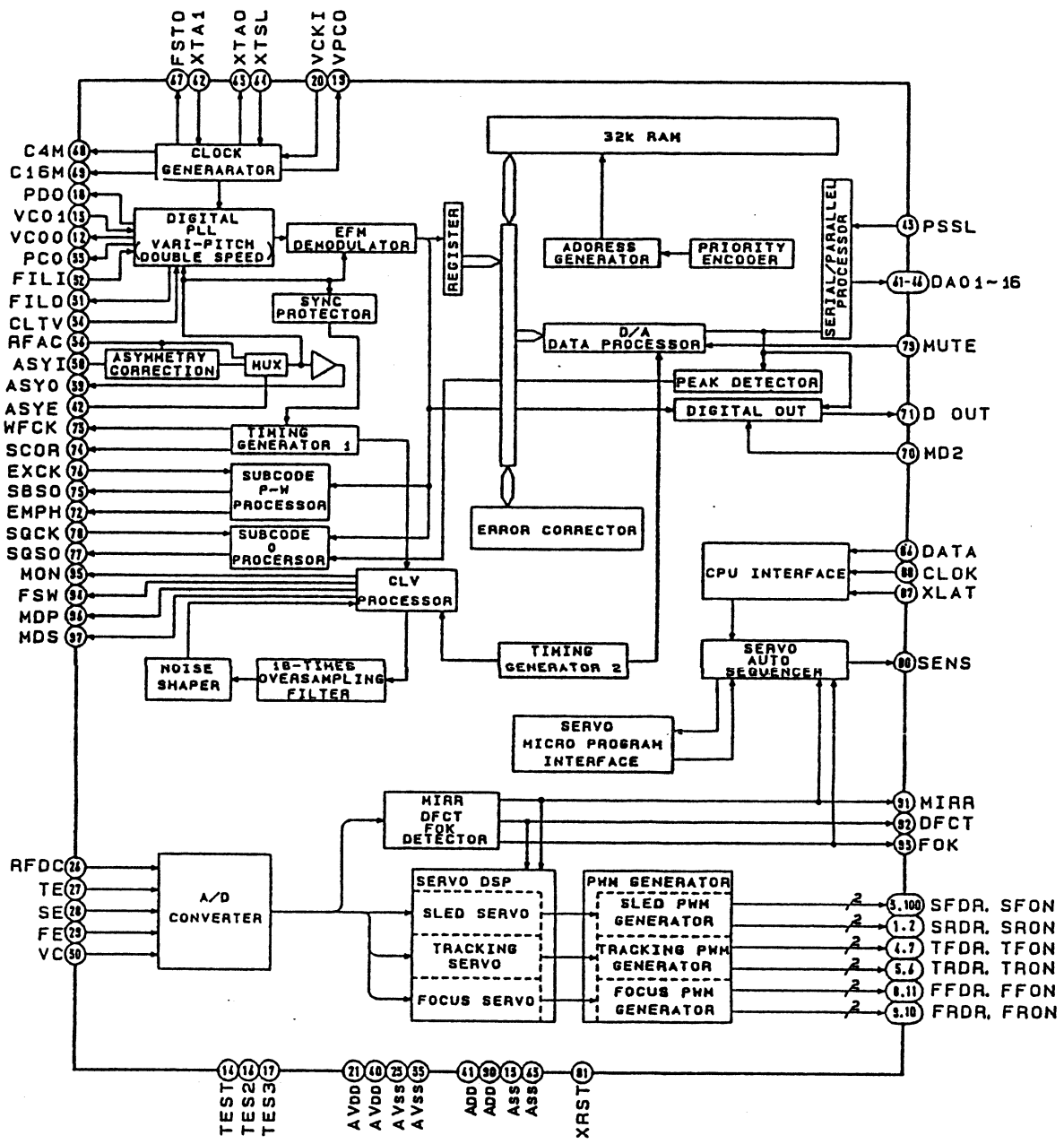
Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les compos une marque pour la sécur Ne les remp pièce portan fié.

C Block Diagrams

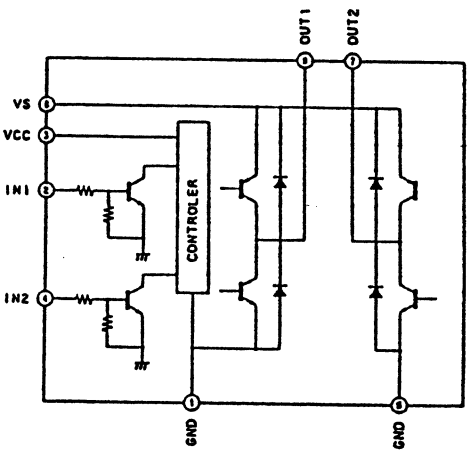
CXA1610M



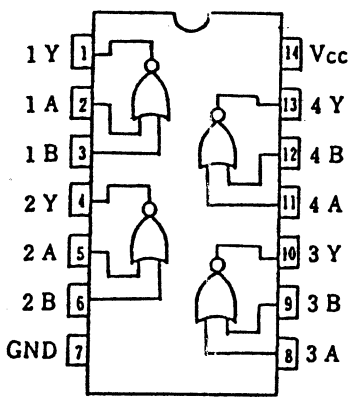
IC2 CXD2515Q



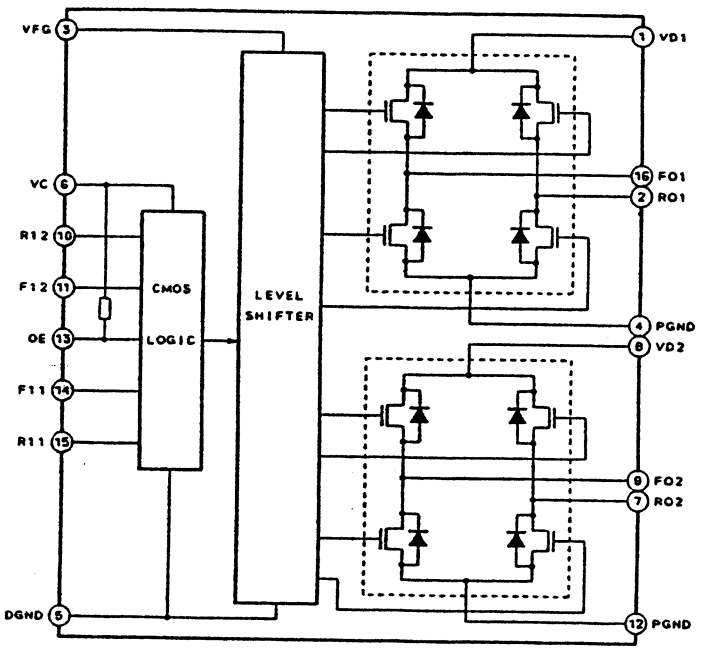
IC3 LB1638M



IC4 SN74HC02ANS



IC5 MPC1732MR2
IC6 MPC1730MR2



Note:

- **All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.**
- **All resistors are in Ω and ¼ W or less unless otherwise specified.**

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	**Note:** Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- ▬▬ : B + Line.
- ▭ : adjustment for repair.
- Power voltage is dc 14.4 V and fed with regulated dc power supply from BATT and ACC terminals.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  ( ) : CD
- Voltages are taken with a VOM (10 MΩ/V).
  Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : CD

5-5. SCHEMATIC DIAGRAM – MAIN Section –

• See page 33 for Waveforms.

【MAIN BOARD】

CN504
FOK 1
SCLK 2
CLDK25 3
C16MIN 4
XLAT25 5
XRSTO 6
DATA25 7
SENS 8
GND 9
SQCK 10
MOSV 11
SQSO 12
SERVO5V 13
SCOR 14
SERVO5V 15
GFS 16
GND 17
LRCK 18
GND 19
DATA 20
LODN 21
BCK 22
PH1IN 23
PH2IN 24
PH3IN 25
PH4IN 26
LMOT2 27
05W 28
LMOT1 29
INSW 30

A TO SERVO BOARD CNJ4 (See page 23)

Q523 UN2212 INSW. CONTROL

IC301 SM5874AM
MUTE BEEN CKO BVSS BCK1 BI BVDD LRC1 TSTN
ATCK MODE RSTN BS XVSS XTO XTI XVDD RO AVDDR RON AVSS LON
XRSTO

IC301
DIGITAL-FILTER D/A-CONVERTER

IC304
CD-FILTER
NJM4558M

IC306
TUNER. AMP

US. CANADIAN AEP. E MODEL
US. CANADIAN MODEL
GERMAM MODEL

Q521 2SB1073-R-TX REG
Q520 2SD2394 REG
Q502 XN1A512 SWITCH
Q519 UN2212 SWITCH
D513 MA4056

<HD.ON>
<CD.ON>

CNJ502 GND ANT-IN ANT

D499 FCB05-TL

Q650 UN2211 LO/BX SWITCH
D655 MA110

AM-ANT 1
FM-ANT 2
ANT-GND 3
LO/BX 4
VT 5
VCO 6
VCO-GND 7
FM+B 8
+B 9
AM+B 10
AM-IF 11
AM-DET 12
SEEK 13
NC 14
NC 15
FM-RCH 16
GND 17
FM-LCH 18
S-METER 19
SD 20
FM-IF 21
ST/MONO 22
FM.DET 23

FE601 TUNER BLOCK

Q605 UN2212 TUNER-AUDIO SWITCH

Q601 2SK1657 VT-CONTROL

IC603 LC7216M
SEEK IFREQ AM.IF FM.IF AM.IN FM.IN VDD PD XOUT
LCL/BX FM/AM TU.ON N.C N.C B.OUT CLK B.IN C.E X.IN

IC603
TUNER-PLL

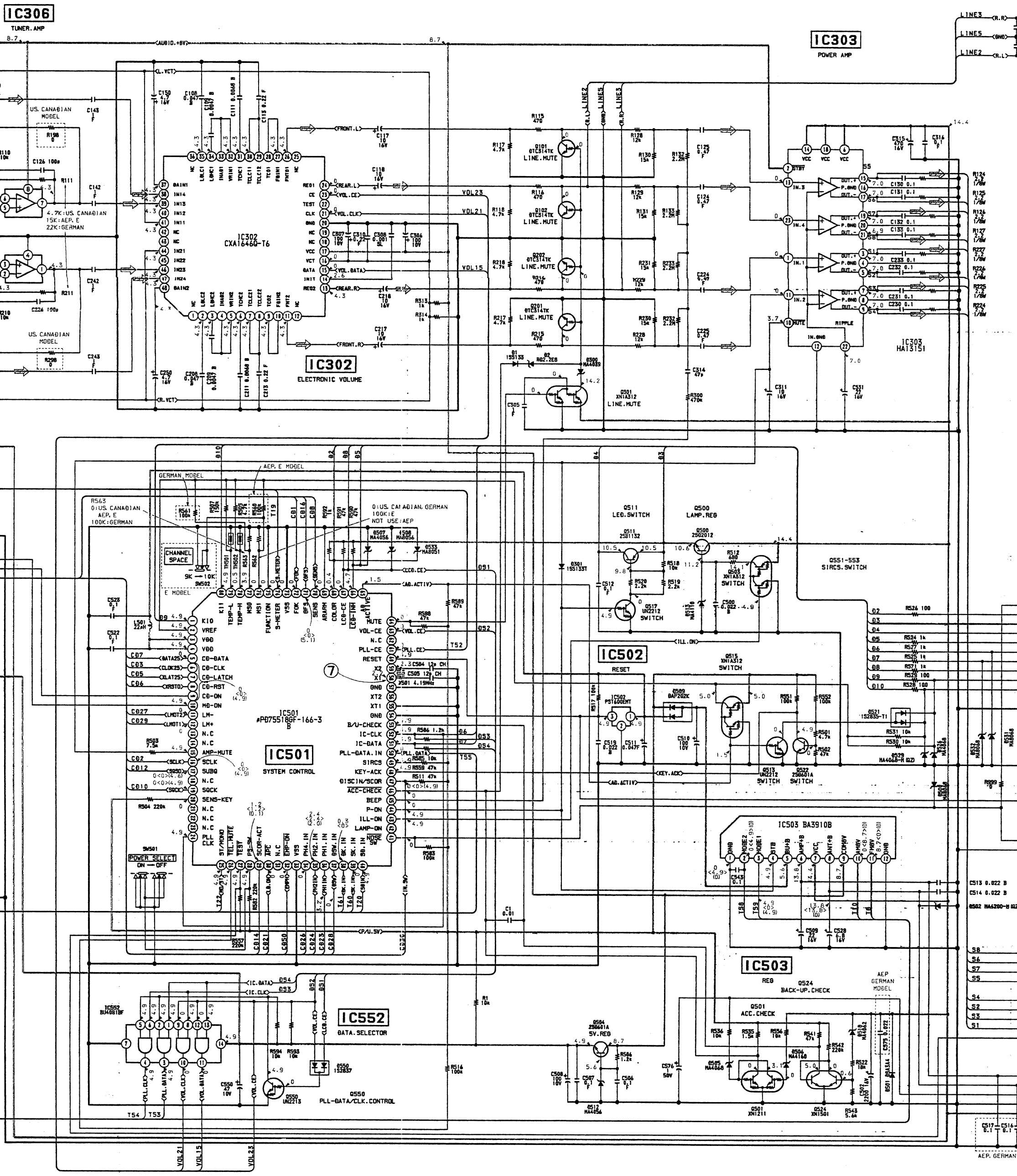
<PLL.DATA> <PLL.CLK> <PLL.DATA> <PLL.CE>

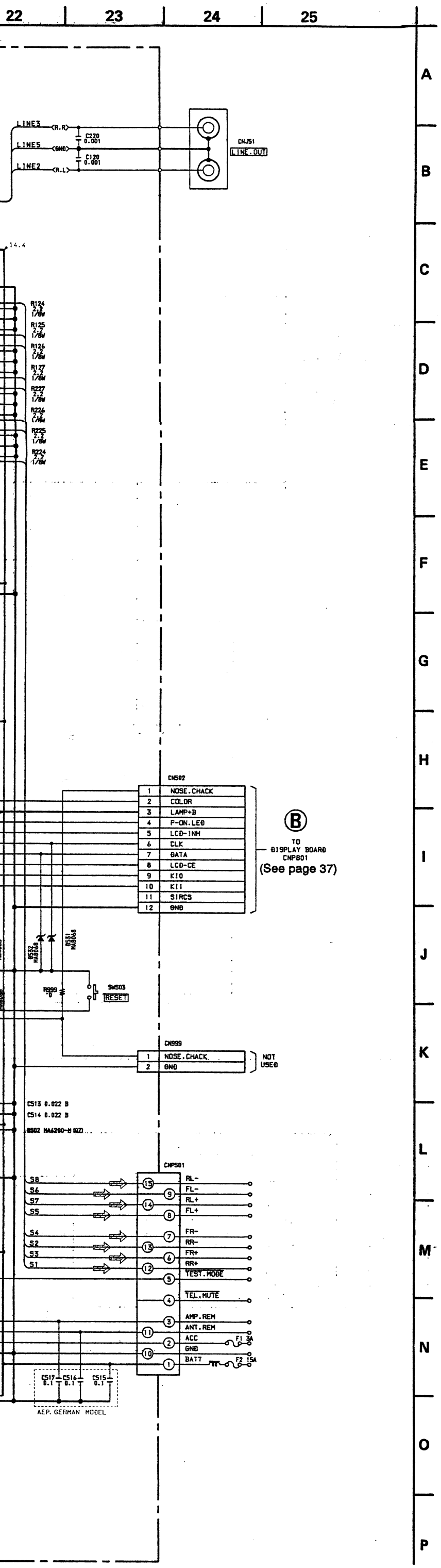
GERMAN MODEL

IC650 TDA1579T-T

IC650
ARI.DECORDER

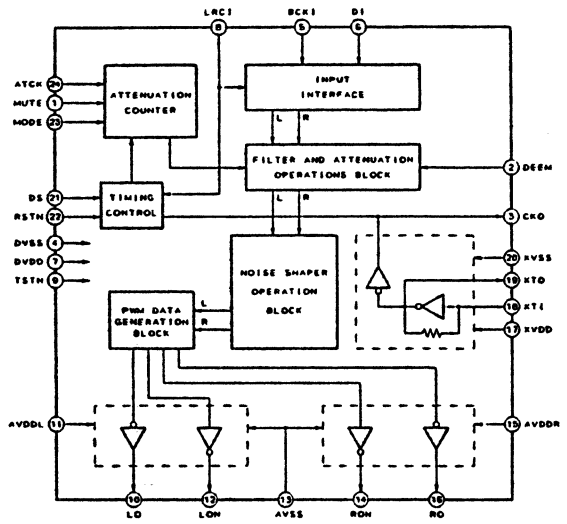
<FM+B> <S-METER> <SDIN> <ND/ST> <SK.IN> <DK.IN>


IC306
TUNER. AMP
IC303
POWER AMP
IC302
CXA1646Q-T6
ELECTRONIC VOLUME
IC303
HA13151
IC501
SYSTEM CONTROL
IC502
RESET
IC503
REG
IC552
DATA. SELECTOR
IC503 BA3910B
US. CANADIAN MODEL
4.7K:US. CANADIAN
15K:AEP. E
22K:GERMAN
GERMAN MODEL
AEP. E MODEL
R563
0:US. CANADIAN
AEP. E
100K:GERMAN
0:US. CANADIAN, GERMAN
100K:E
NOT USE:AEP
CHANNEL SPACE
9K → 10K
SW502
E MODEL
SW501
POWER SELECT
ON — OFF
Q511
LEG. SWITCH
Q500
LAMP. REG
Q511
2SB1132
Q500
2SD2012
Q503
XN1A312
SWITCH
Q517
UN2212
SWITCH
Q515
XN1A312
SWITCH
Q513
UN2212
SWITCH
Q522
2SB601A
SWITCH
Q551-553
SIRCS. SWITCH
Q509
DAP202K
IC502
PST600EMT
Q550
UN2213
PLL-DATA/CLK. CONTROL
Q504
2SB601A
5V. REG
Q501
ACC. CHECK
Q524
BACK-UP. CHECK
AEP
GERMAN
MODEL
AEP, GERMAN
RIPPLE
MUTE
STBY
VCC
IN. GND
LINE2
LINE5
LINE3
VOL23
VOL21
VOL15
(AUDIO. +8V)
(P/U. 5V)
(ILL. ON)
(KEY. ACK)
(AD. ACTIV)
(FRONT. L)
(FRONT. R)
(REAR. L)
(REAR. R)
(VOL. CE)
(VOL. CLK)
(VOL. DATA)
(PLL. CE)
(PLL. DATA)
(IC. DATA)
(IC. CLK)
(L. VCT)
(R. VCT)
(LCD. CE)
(LCD-INH)
(DATA2S)
(CLOK2S)
(XLAT2S)
(XRSTO)
(SCLK)
(SUBQ)
(SQCK)
(SENS)
(LMOT2)
(LMOT1)
(FOK)
(SENS)
(S-METER)
(TEL. MUTE)
(ST/MONO)
(TEST)
(PS-SW)
(SCOR-ACT)
(APC)
(EMP-ON)
(PH4. IN)
(PH2. IN)
(PH1. IN)
(BSW. IN)
(SK. IN)
(SB. IN)
(SBI(N))
(IN. SW)
(MD/SW)
(LD. ON)
(SCOR)
(BSW)
(SBI)
(SK. IN)
(SK. IN)
(SK. IN)
(SBI(N))
(MD/SW)
(IN.

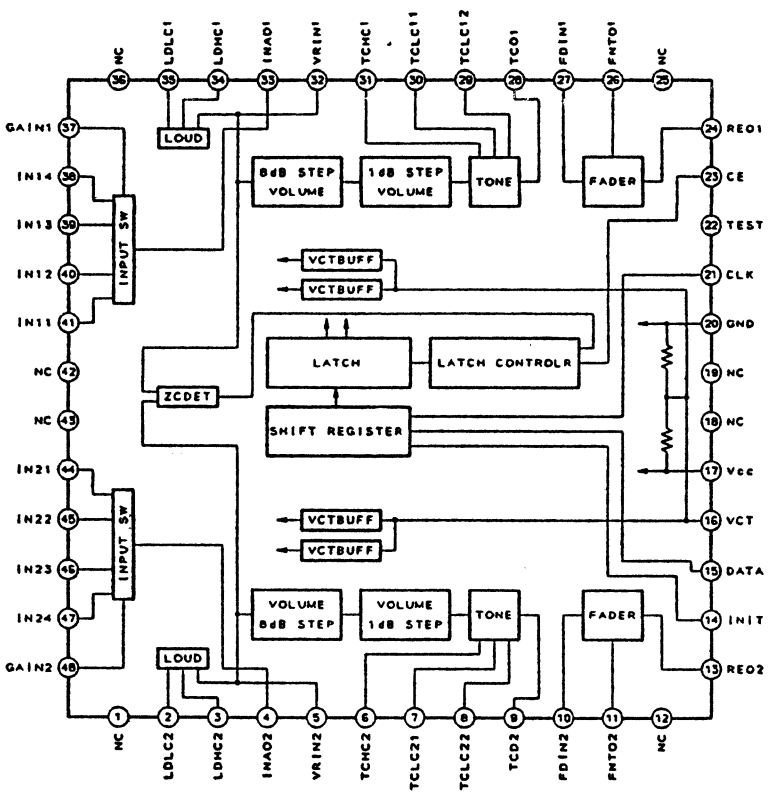


• IC Block Diagrams

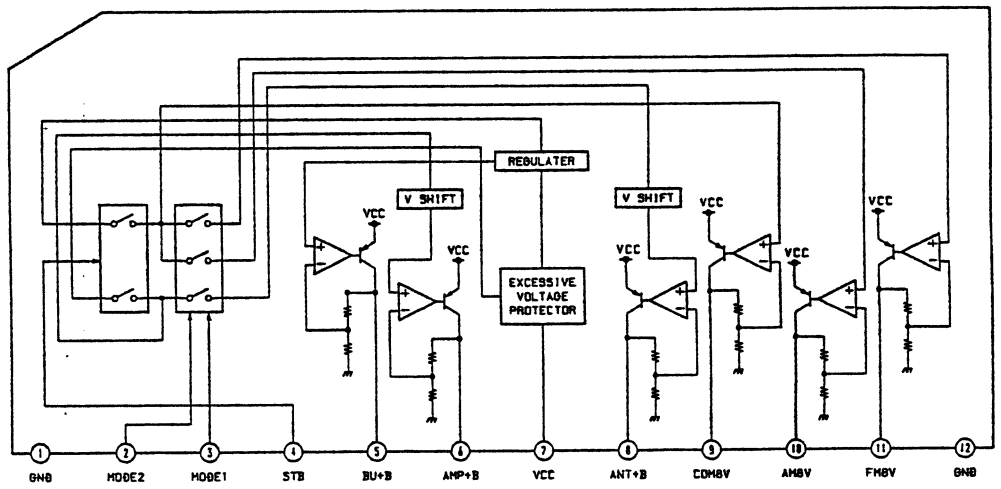
IC301 SM5874AM-ET



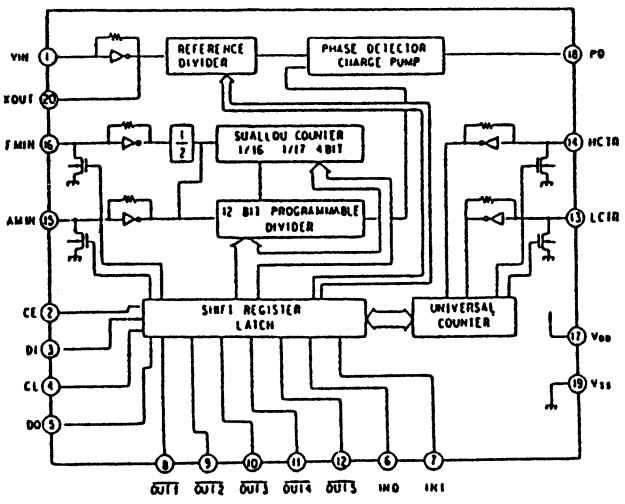
IC302 CXA1646Q



IC503 BA3910B-V3



IC603 LC7216M



Note:

- **All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.**
- **All resistors are in Ω and ¼ W or less unless otherwise specified.**
- ▬▬ : B + Line.
- ▭ : **panel designation.**
- Power voltage is dc 14.4 V and fed with regulated dc power supply from BATT and ACC terminals.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ( ) : CD
  < > : AM
- Voltages are taken with a VOM (10 MΩ/V).
  Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : FM
  ⇨ : CD

5-6. PRINTED WIRING BOARD – MAIN Section –

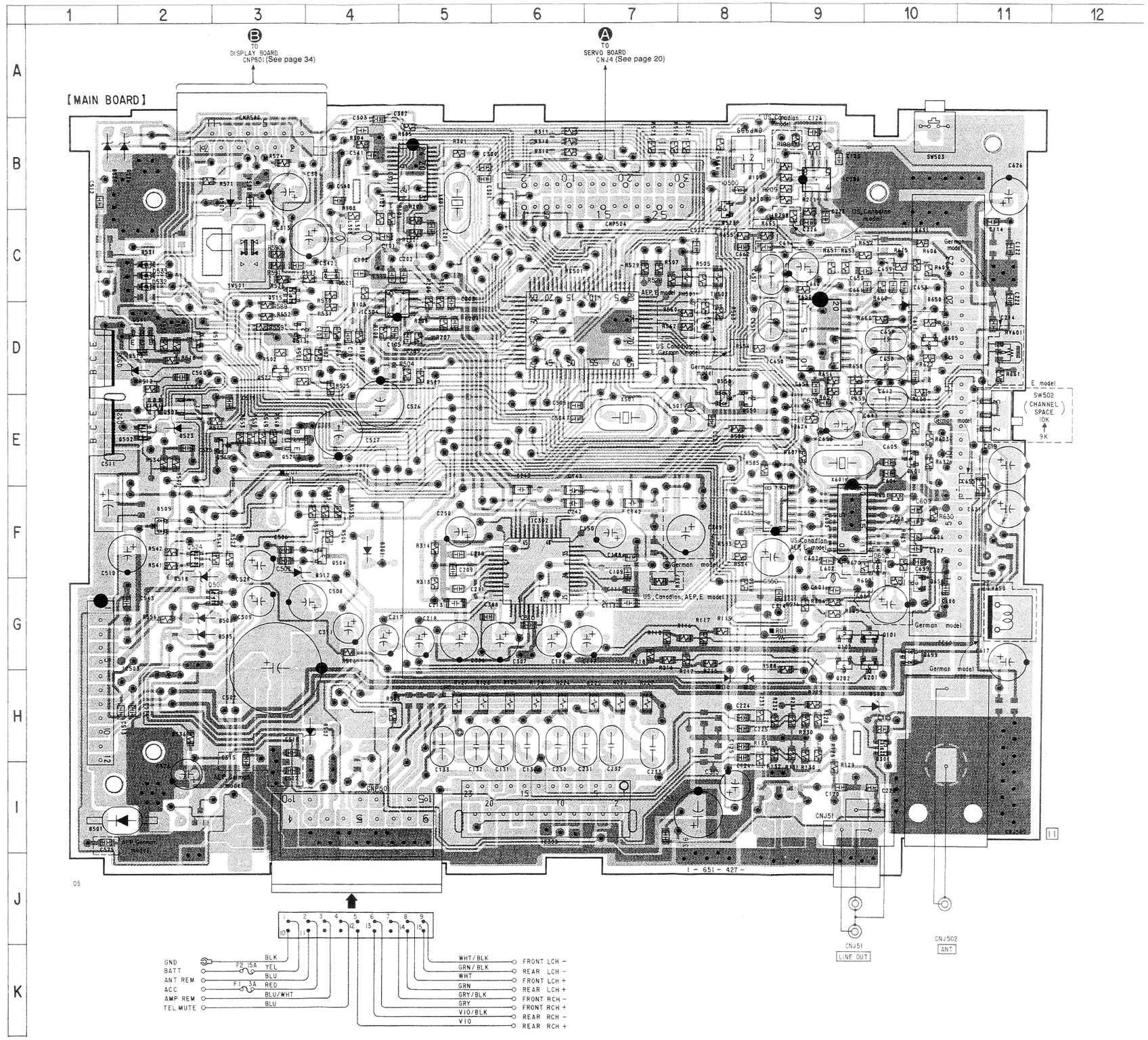
• See page 40 for Semiconductor Lead Layouts.

• Semiconductor Location

Ref. No.	Location
D1	H-8
D2	H-8
D300	H-10
D301	F-4
D500	B-8
D501	I-1
D502	H-4
D505	G-2
D506	G-2
D507	B-3
D508	B-3
D509	F-2
D510	I-2
D511	C-2
D512	F-3
D513	D-2
D518	G-2
D521	C-4
D523	E-2
D526	B-2
D529	B-1
D531	C-2
D532	C-2
D533	C-2
D550	E-8
D650	D-10 (German)
D655	F-10
D699	G-10
IC301	B-5
IC302	F-6
IC303	I-6
IC304	D-4
IC306	B-9
IC501	D-6
IC502	E-2
IC503	H-1
IC552	F-9
IC603	F-9
IC650	D-9 (German)
Q101	G-10
Q102	G-9
Q201	H-10
Q202	H-9
Q301	H-10
Q500	D-1
Q501	G-3
Q502	E-2
Q503	E-2
Q504	F-4
Q511	D-2
Q513	D-3
Q515	C-3
Q517	D-2
Q519	E-3
Q520	E-1
Q521	E-3
Q522	D-3
Q523	C-8
Q524	F-2
Q550	E-8
Q551	D-3
Q552	C-2
Q553	I-2
Q601	E-10
Q605	D-10
Q650	G-10

Note:

- ○——— : parts extracted from the component side.
- ■ : parts mounted on the conductor side.
- ● : Through hole.
- ▒ : Pattern of the rear side.
- ▒ : Pattern from the side which enables seeing.



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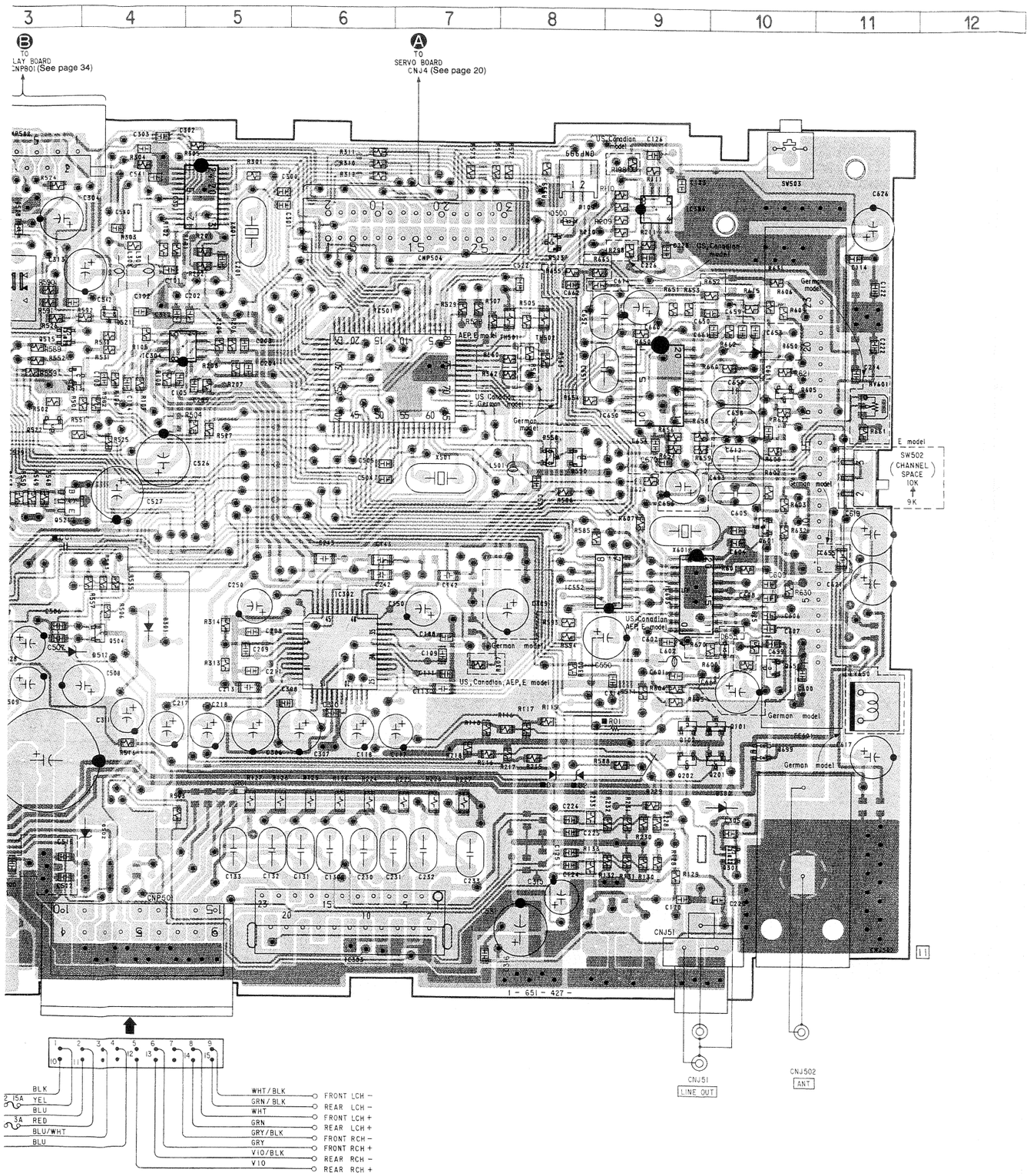
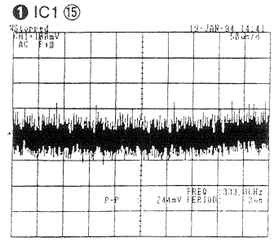
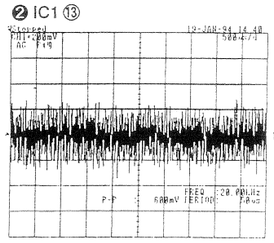


• Waveforms

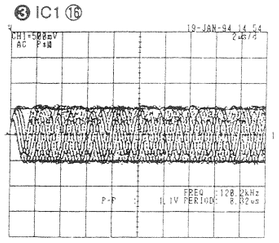
❶ IC1 ⑮



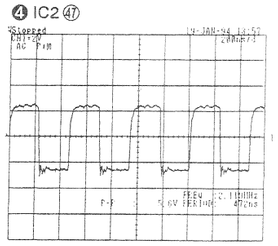
❷ IC1 ⑬



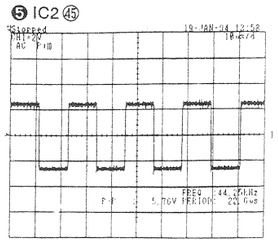
❸ IC1 ⑯



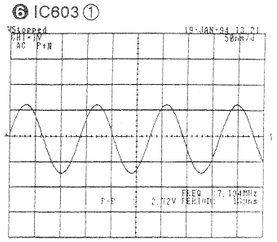
❹ IC2 ㊼



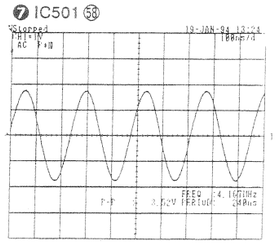
❺ IC2 ㊺



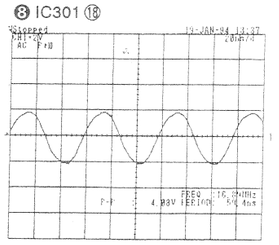
❻ IC603 ①



❼ IC501 ㊽



❽ IC301 ⑱

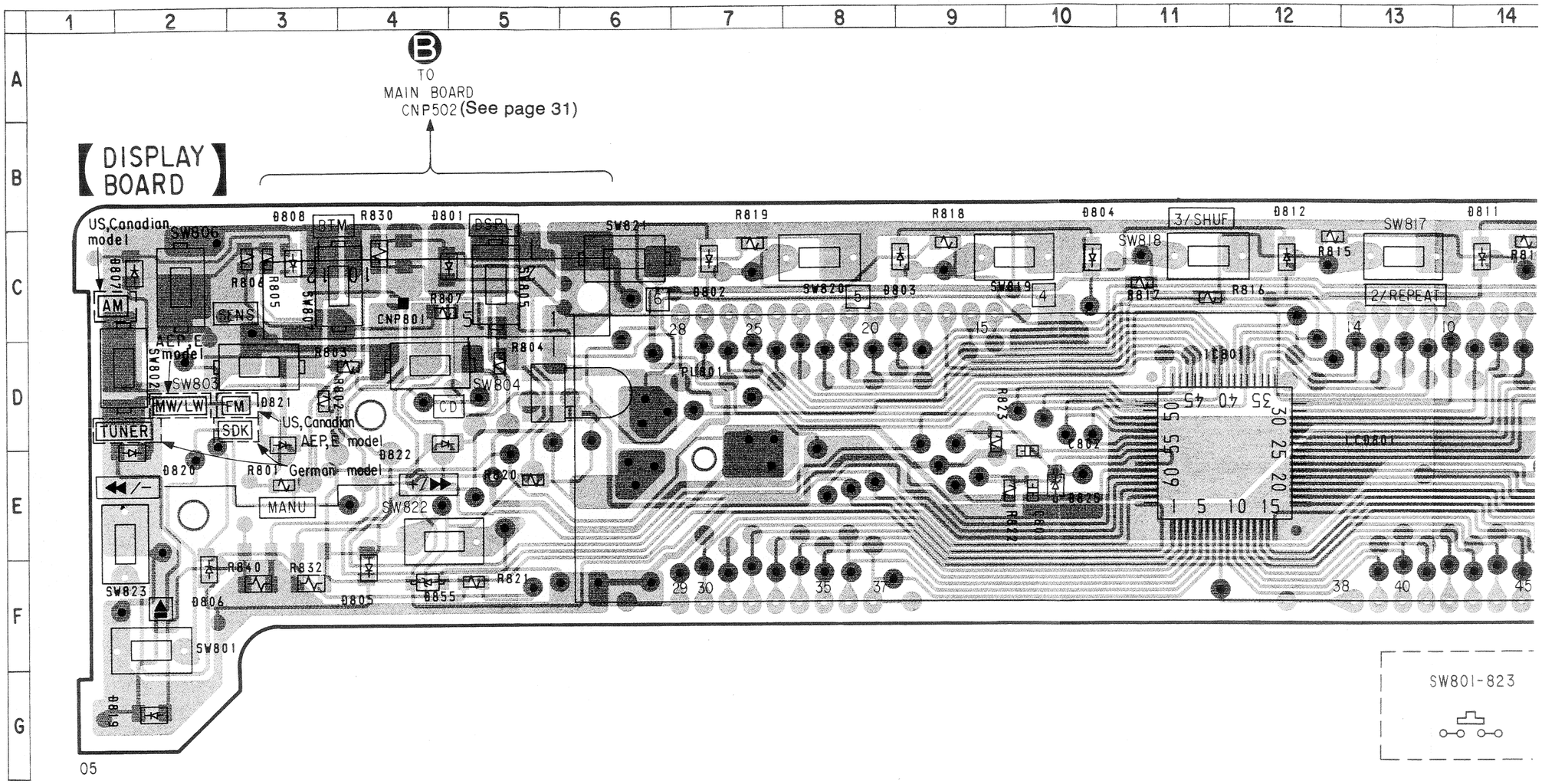


5-7. PRINTED WIRING BOARD – DISPLAY Section –

• See page 40 for Semiconductor Lead Layouts.

• **Semiconductor Location**

Ref. No.	Location
D801	C-4
D802	C-7
D803	C-9
D804	C-10
D805	F-4
D806	F-2
D807	C-2
D808	C-3
D809	C-17
D810	C-15
D811	C-14
D812	C-12
D813	D-21
D814	D-19
D815	D-17
D816	G-20
D817	F-20
D818	F-18
D819	G-2
D820	E-2
D821	D-3
D822	E-4
D823	C-19
D825	E-10
D851	C-17
D852	C-17
D853	C-16
D855	F-4
IC801	D-11



05

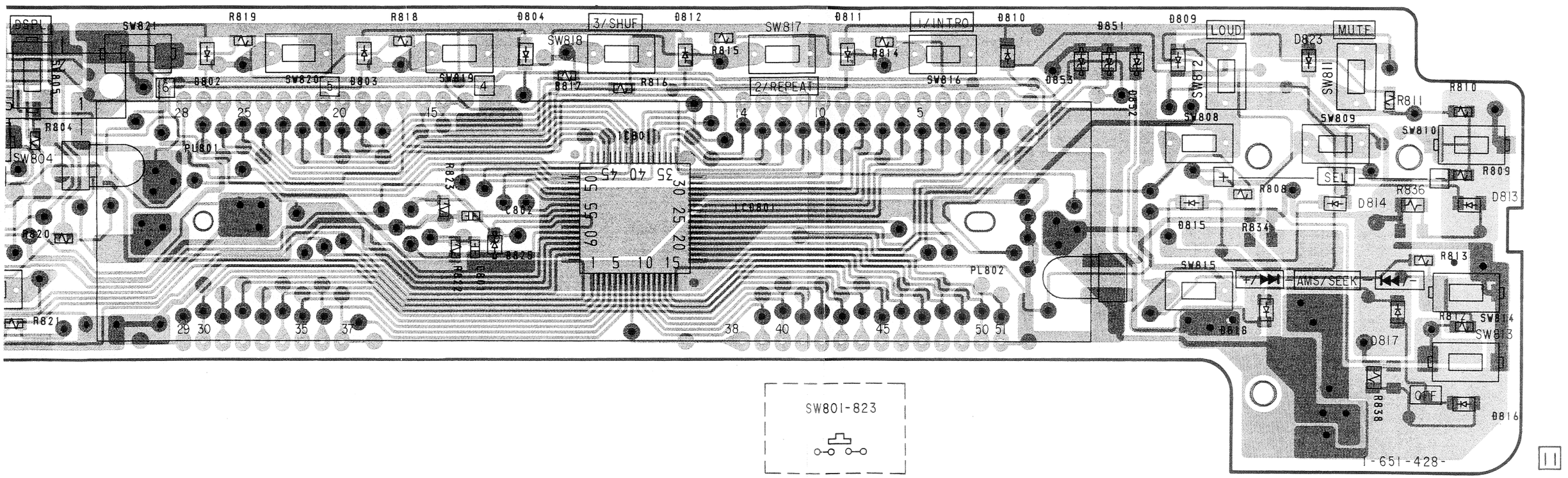
Note:

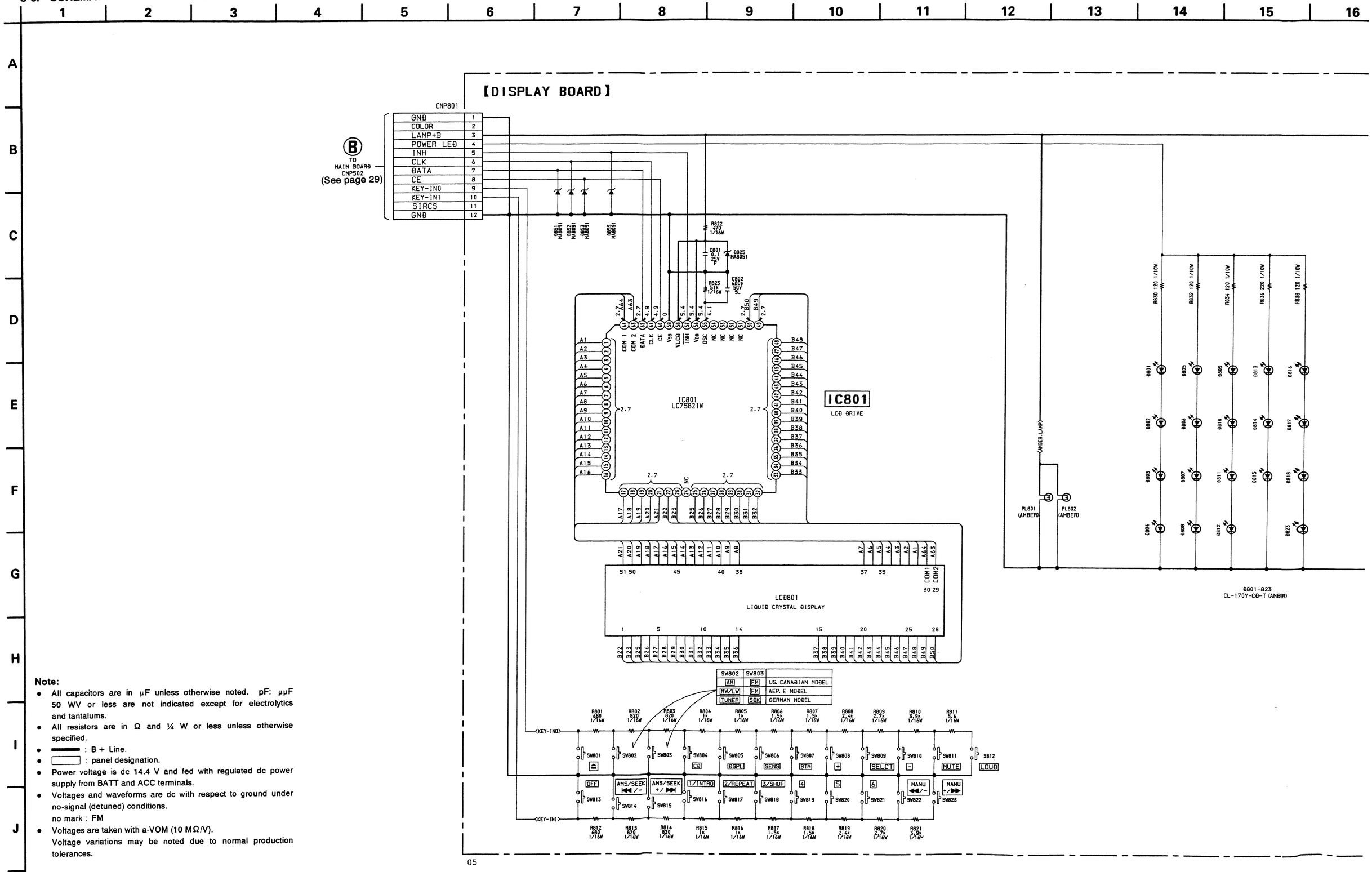
- ○——— : parts extracted from the component side.
- ■ : parts mounted on the conductor side.
- ● : Through hole.
- ▨ : Pattern of the rear side.
- ▨ : Pattern from the side which enables seeing.

5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21

D

See page 31)





Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- ▬▬ : B + Line.
- ▭ : panel designation.
- Power voltage is dc 14.4 V and fed with regulated dc power supply from BATT and ACC terminals.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
- Voltages are taken with a·VOM (10 MΩ/V).
  Voltage variations may be noted due to normal production tolerances.

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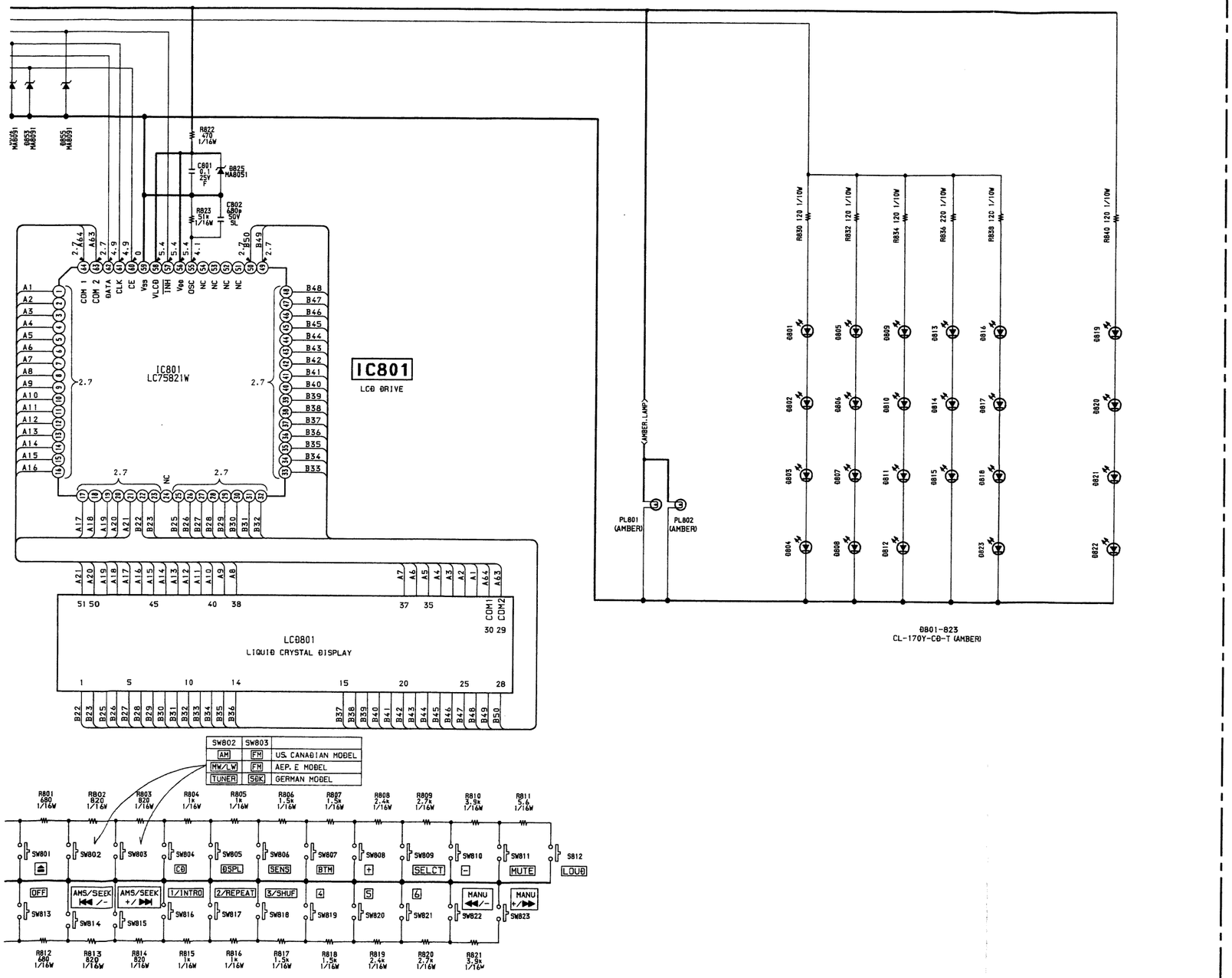
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

A B C D E F G H I J

JARD]



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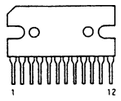
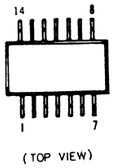
• Semiconductor Lead Layouts

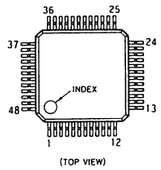
BA3910B-V3



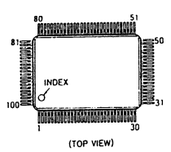
BU4081BF



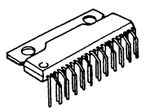
CXA1646Q



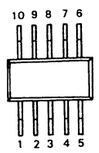
CXA2515Q



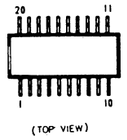
HA13150



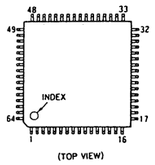
LB1638M



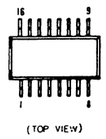
LC7216M
MPC1730MR2



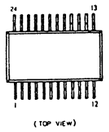
LC75821M



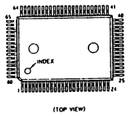
MPC1732MR2



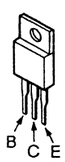
SM5874AM-ET



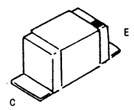
μPD75518GF-166-3B9



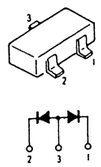
2SD2394-G
2SD2012



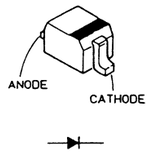
CPT-181S-C-TU



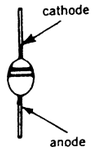
DAP202K



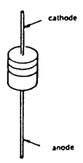
DTZ5.6B
DTZ6.8B
MA110
MA8051-M
MA8110-M



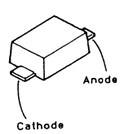
DSA3A4



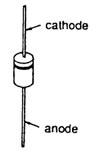
MA4039-M
MA4056-M
MA4060-M
MA4162-M
MA4200-M



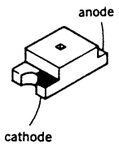
MA8051-H
MA8091-M



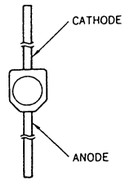
MA8068H-TX
MA4068-M



CL-170Y-CD-T



CL-2001R-X-TU



SECTION 6
EXPLODED VIEWS

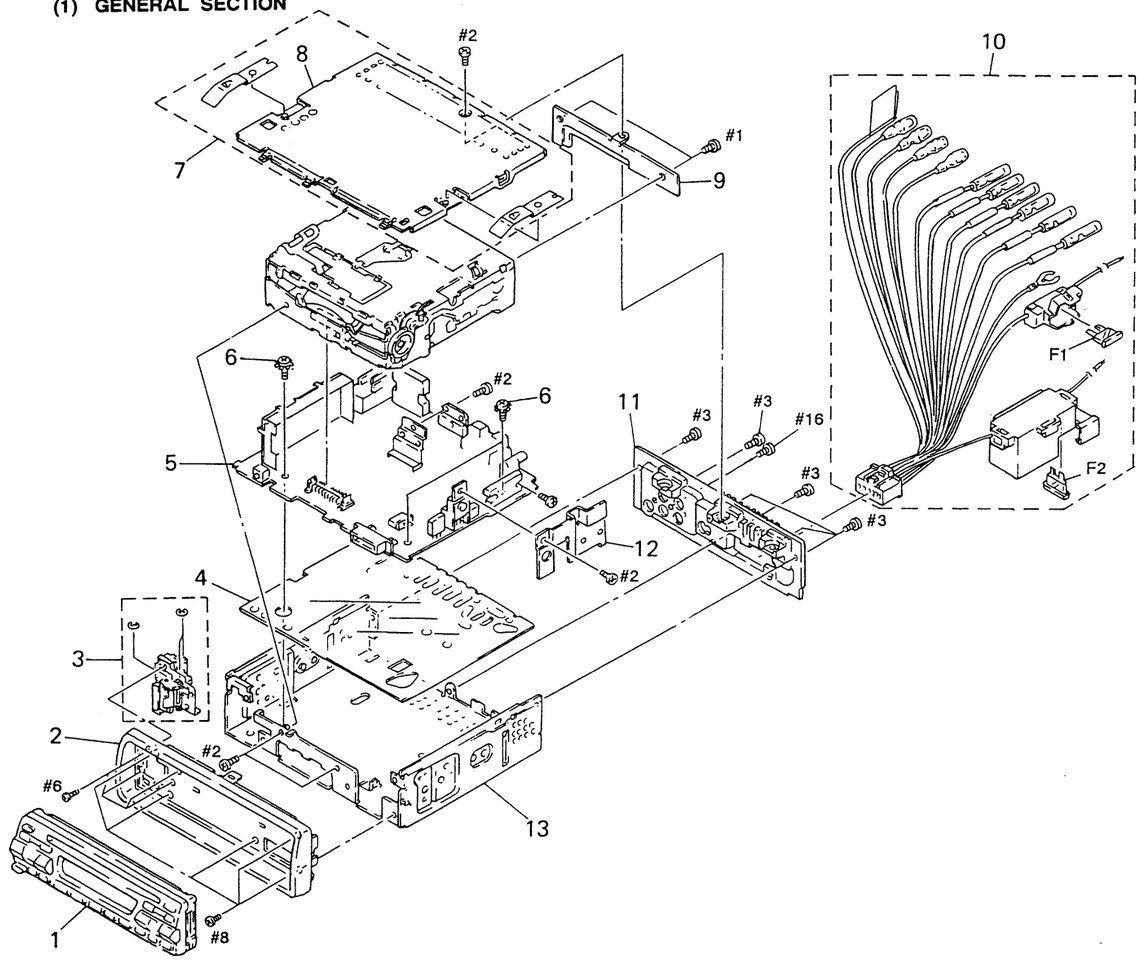
NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ Parts Color ↑ Cabinet's Color
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

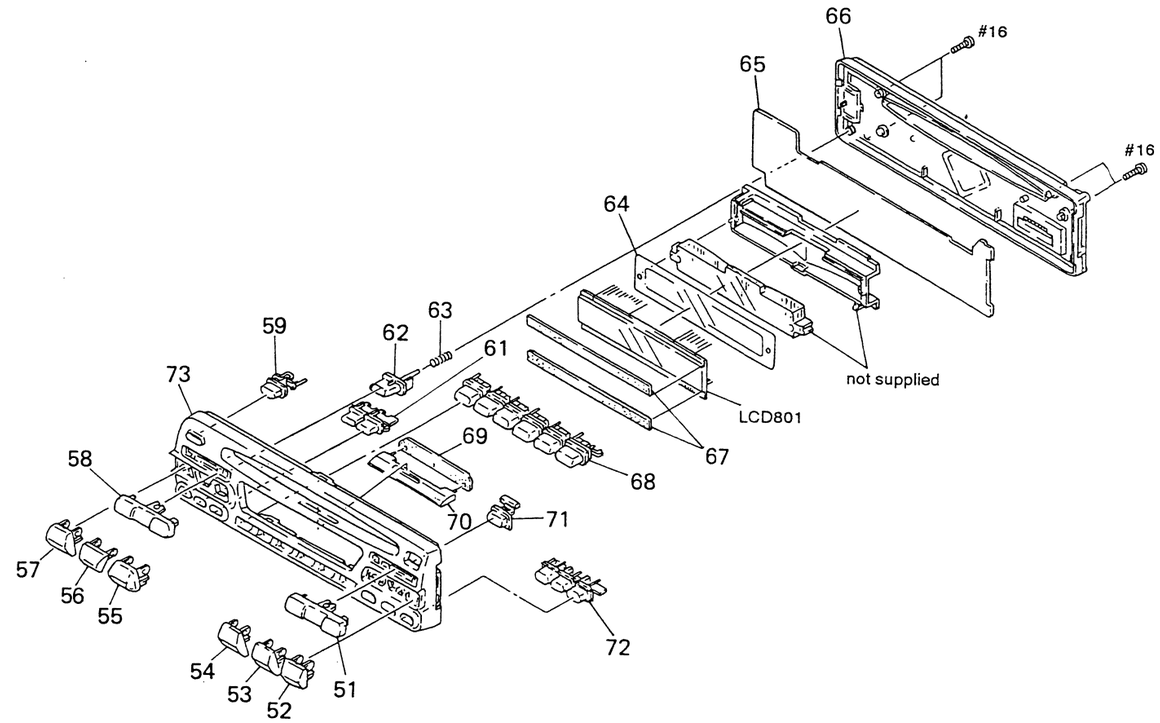
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le neméro spécifié.

(1) GENERAL SECTION



Ref. No.	Part No.	Description	Remark
* 1	A-3252-958-A	PANEL ASSY, FRONT (US, Canadian, E)	
* 1	A-3252-957-A	PANEL ASSY, FRONT (AEP)	
* 1	A-3252-956-A	PANEL ASSY, FRONT (German)	
2	X-3367-725-1	PANEL (SUB) ASSY	
3	X-3366-931-1	LOCK ASSY	
* 4	3-909-315-01	SHEET, INSULATING	
* 5	A-3298-017-A	MAIN BOARD, COMPLETE (German)	
* 5	A-3298-019-A	MAIN BOARD, COMPLETE (E)	
* 5	A-3298-021-A	MAIN BOARD, COMPLETE (AEP)	
* 5	A-3298-023-A	MAIN BOARD, COMPLETE (US, Canadian)	
6	3-376-464-11	SCREW(+PTT 2.6X6), GROUND POINT	
* 7	X-3367-726-1	COVER ASSY	
8	3-909-332-01	COVER	
* 9	3-909-336-01	BRACKET (MD)	
10	1-765-082-11	CORD (WITH CONNECTOR)	
* 11	3-909-333-01	HEAT SINK	
* 12	3-909-314-01	HEAT SINK	
* 13	3-909-334-01	CHASSIS (MAIN)	
F1	1-533-326-11	FUSE, GLASS TUBE (3A)	
F2	1-533-331-11	FUSE, GLASS TUBE (15A)	

(2) FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
51	3-908-765-01	BUTTON (MANU)	
52	3-909-321-01	BUTTON (TUNER) (German)	
52	3-909-321-21	BUTTON (AM) (US, Canadian, E)	
52	3-909-321-31	BUTTON (MW/LW) (AEP)	
53	3-909-320-11	BUTTON (FM) (US, Canadian, E, AEP)	
53	3-909-320-41	BUTTON (SDK) (German)	
54	3-909-319-11	BUTTON (CD)	
55	3-909-318-01	BUTTON (+)	
56	3-909-317-01	BUTTON (SEL)	
57	3-909-316-01	BUTTON (-)	
58	3-908-764-01	BUTTON (AMS/SEEK)	
59	3-908-766-01	BUTTON (OFF)	
61	3-909-328-01	BUTTON (2 GANG)	
62	3-909-326-01	BUTTON (RELEASE)	
63	3-904-193-01	SPRING (RELEASE)	
64	3-909-322-01	SHEET (ILLUMINATOR)	
* 65	A-3298-025-A	DISPLAY BOARD, COMPLETE	
66	3-909-310-01	PANEL, FRONT BACK	
67	3-911-575-01	SHEET (ELECTROSTATIC)	
68	3-908-763-01	BUTTON (1-6)	
69	3-909-313-01	SHEET (DOOR F)	
* 70	3-909-311-01	PLATE (C), LIGHT GUIDE	
71	3-908-761-01	BUTTON (EJECT)	
72	3-909-329-01	BUTTON (3 GANG)	
73	3-909-823-31	PANEL, FRONT (US, Canadian, AEP, E)	
73	3-909-823-41	PANEL, FRONT (German)	
LCD801	1-810-407-21	DISPLAY PANEL, LIQUID CRYSTAL	

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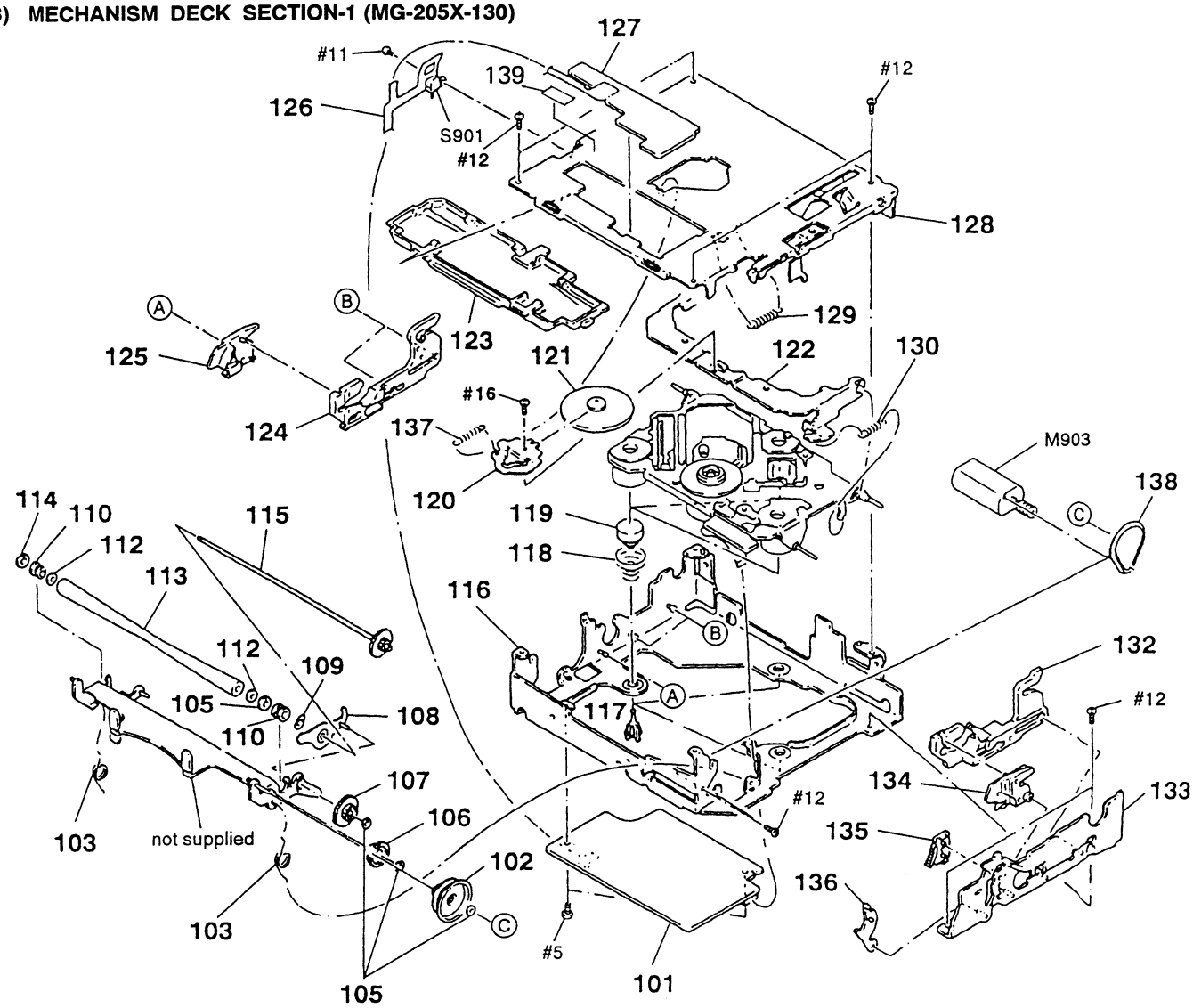
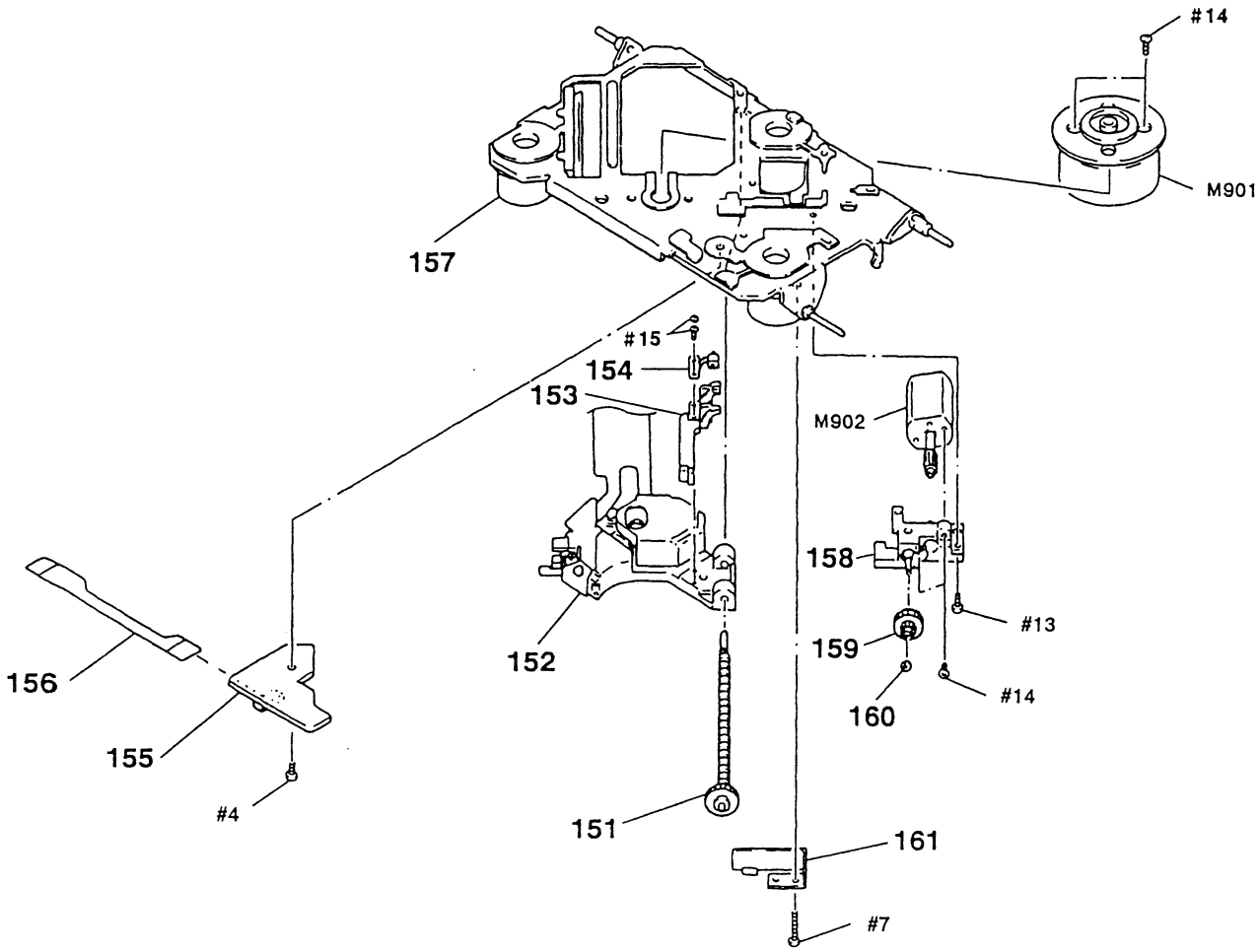
(3) MECHANISM DECK SECTION-1 (MG-205X-130)



Ref. No.	Part No.	Description	Remark
* 101	A-3295-950-A	SERVO BOARD, COMPLETE	
102	3-384-894-01	GEAR (R1)	
103	3-384-900-01	SPRING (PRESS)	
105	3-578-242-11	WASHER	
106	3-384-895-01	GEAR (R2)	
107	3-384-896-01	GEAR (DOWN)	
108	X-3366-858-3	ARM ASSY, FRICTION	
109	3-384-899-01	SPRING (FRICTION)	
110	3-384-892-01	BEARING (ROLLER)	
112	3-701-438-11	WASHER, 2.5	
113	3-323-231-11	ROLLER (T)	
114	3-386-150-01	RING (ROLLER), RETAINING	
115	A-3252-591-A	GEAR ASSY, ROLLER	
* 116	X-3366-852-1	CHASSIS (M) ASSY	
117	3-384-923-01	SHAFT (DAMPER)	
118	3-384-916-01	SPRING (FL)	
119	3-384-914-01	DAMPER	
* 120	3-384-915-11	BRACKET (CP)	
* 121	3-384-918-01	RETAINER (DISC)	
122	3-384-908-11	ARM, CHUCKING	

Ref. No.	Part No.	Description	Remark
* 123	3-384-886-01	GUIDE (DISC)	
124	3-384-888-01	SLIDER (L)	
125	3-384-887-01	LEVER (L)	
126	1-164-401-11	SENSOR FLEXIBLE BOARD	
* 127	A-3222-525-A	SENSOR BOARD, COMPLETE	
* 128	X-3366-854-1	CHASSIS (T) ASSY	
129	3-384-881-02	SPRING (12)	
130	3-384-917-01	SPRING (CH)	
132	X-3366-102-1	SLIDER (R) ASSY	
* 133	X-3365-911-1	CHASSIS (R) ASSY	
134	3-384-889-01	LEVER (R)	
135	3-384-897-01	GEAR (RACK)	
136	3-384-891-01	LEVER (ST)	
137	3-388-331-01	SPRING (T)	
138	3-387-776-01	BELT (L)	
* 139	3-704-132-01	LABEL (K), SELF	
M903	A-3252-580-A	MOTOR (L) ASSY (LOADING)	
S901	1-692-441-11	SWITCH, MICRO (DISC DET)	

(4) MECHANISM DECK SECTION-2 (MG-205X-130)



Ref. No.	Part No.	Description	Remark
151	A-3252-586-A	SHAFT (SL) ASSY	
⚠152	8-848-283-11	DEVICE, OPTICAL KSS-313A	
153	3-384-922-01	GEAR (SL FEED)	
154	3-384-921-01	SPRING (SL FEED)	
* 155	1-650-144-11	MOTOR BOARD	
156	1-646-402-11	MOTOR FLEXIBLE BOARD	
* 157	X-3365-916-1	CHASSIS (OPT) ASSY (OUTSERT)	
158	X-3366-100-1	BASE (DRIVING) ASSY	
159	3-384-912-01	GEAR (K2)	
160	3-570-615-00	POLY-WASHER (DIA. 1. 2)	
161	3-384-913-11	SPRING (THRUST RETAINER)	
M901	X-3367-484-1	MOTOR (SPINDLE) ASSY	
M902	A-3252-585-A	MOTOR (SL) ASSY (SLED)	

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Note: Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le neméro spécifié.

SECTION 7
ELECTRICAL PARTS LIST

DISPLAY

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u:μ, for example:
  uA..: μA.. uPA..: μPA..
  uPB..: μPB.. uPC..: μPC.. uPD..: μPD..
- CAPACITORS
  uF: μF
- COILS
  uH: μH

When indicating parts by reference number, please include the board.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description			Remark
*	A-3298-025-A	DISPLAY BOARD, COMPLETE			
		**********			
*	3-908-754-01	PLATE (LCD), LIGHT GUIDE			
*	3-909-322-01	SHEET (ILLUMINATOR)			
*	3-909-331-01	HOLDER (LCD)			
		< CAPACITOR >			
C801	1-164-156-11	CERAMIC CHIP	0.1uF	25V	
C802	1-164-471-11	CERAMIC CHIP	680PF 5%	50V	
		< CONNECTOR >			
CNP801	1-764-423-11	PIN, CONNECTOR 12P			
		< DIODE >			
D801	8-719-033-13	DIODE	CL-170Y-CD-T		
D802	8-719-033-13	DIODE	CL-170Y-CD-T		
D803	8-719-033-13	DIODE	CL-170Y-CD-T		
D804	8-719-033-13	DIODE	CL-170Y-CD-T		
D805	8-719-033-13	DIODE	CL-170Y-CD-T		
D806	8-719-033-13	DIODE	CL-170Y-CD-T		
D807	8-719-033-13	DIODE	CL-170Y-CD-T		
D808	8-719-033-13	DIODE	CL-170Y-CD-T		
D809	8-719-033-13	DIODE	CL-170Y-CD-T		
D810	8-719-033-13	DIODE	CL-170Y-CD-T		
D811	8-719-033-13	DIODE	CL-170Y-CD-T		
D812	8-719-033-13	DIODE	CL-170Y-CD-T		
D813	8-719-033-13	DIODE	CL-170Y-CD-T		
D814	8-719-033-13	DIODE	CL-170Y-CD-T		
D815	8-719-033-13	DIODE	CL-170Y-CD-T		
D816	8-719-033-13	DIODE	CL-170Y-CD-T		
D817	8-719-033-13	DIODE	CL-170Y-CD-T		
D818	8-719-033-13	DIODE	CL-170Y-CD-T		
D819	8-719-033-13	DIODE	CL-170Y-CD-T		
D820	8-719-033-13	DIODE	CL-170Y-CD-T		
D821	8-719-033-13	DIODE	CL-170Y-CD-T		
D822	8-719-033-13	DIODE	CL-170Y-CD-T		
D823	8-719-033-13	DIODE	CL-170Y-CD-T		
D825	8-719-422-43	DIODE	MA8051-H		
D851	8-719-422-97	DIODE	MA8091-M		
D852	8-719-422-97	DIODE	MA8091-M		
D853	8-719-422-97	DIODE	MA8091-M		
D855	8-719-422-97	DIODE	MA8091-M		
		< IC >			
IC801	8-759-249-93	IC	LC75821W		
		< LIQUID CRYSTAL DISPLAY >			
LCD801	1-810-407-21	DISPLAY PANEL, LIQUID CRYSTAL			
		< PILOT LAMP >			
PL801	1-517-181-21	LAMP, PILOT			
PL802	1-517-181-21	LAMP, PILOT			
		< RESISTOR >			
R801	1-218-688-11	METAL CHIP	680	0.50% 1/16W	
R802	1-218-845-11	METAL CHIP	820	0.50% 1/16W	
R803	1-218-845-11	METAL CHIP	820	0.50% 1/16W	
R804	1-216-821-11	METAL CHIP	1K	5% 1/16W	
R805	1-216-821-11	METAL CHIP	1K	5% 1/16W	
R806	1-216-823-11	METAL CHIP	1.5K	5% 1/16W	
R807	1-216-823-11	METAL CHIP	1.5K	5% 1/16W	
R808	1-218-701-11	METAL CHIP	2.4K	0.50% 1/16W	
R809	1-218-702-11	METAL CHIP	2.7K	0.50% 1/16W	
R810	1-218-706-11	METAL CHIP	3.9K	0.50% 1/16W	
R811	1-218-295-11	METAL CHIP	5.6K	0.50% 1/16W	
R812	1-218-688-11	METAL CHIP	680	0.50% 1/16W	
R813	1-218-845-11	METAL CHIP	820	0.50% 1/16W	
R814	1-218-845-11	METAL CHIP	820	0.50% 1/16W	
R815	1-216-821-11	METAL CHIP	1K	5% 1/16W	
R816	1-216-821-11	METAL CHIP	1K	5% 1/16W	
R817	1-216-823-11	METAL CHIP	1.5K	5% 1/16W	
R818	1-216-823-11	METAL CHIP	1.5K	5% 1/16W	
R819	1-218-701-11	METAL CHIP	2.4K	0.50% 1/16W	
R820	1-218-702-11	METAL CHIP	2.7K	0.50% 1/16W	
R821	1-218-706-11	METAL CHIP	3.9K	0.50% 1/16W	
R822	1-216-817-11	METAL CHIP	470	5% 1/16W	
R823	1-218-331-11	METAL GLAZE	51K	5% 1/16W	
R830	1-216-027-00	METAL CHIP	120	5% 1/10W	

DISPLAY MAIN

Ref. No.	Part No.	Description			Remark
R832	1-216-027-00	METAL CHIP	120	5%	1/10W
R834	1-216-027-00	METAL CHIP	120	5%	1/10W
R836	1-216-033-00	METAL CHIP	220	5%	1/10W
R838	1-216-027-00	METAL CHIP	120	5%	1/10W
R840	1-216-027-00	METAL CHIP	120	5%	1/10W
		< SWITCH >			
SW801	1-572-704-21	SWITCH, KEY BOARD (⏏)			
SW802	1-692-386-21	SWITCH (AM) (US, Canadian)			
SW802	1-692-386-21	SWITCH (MW/LW) (AEP, E)			
SW802	1-692-386-21	SWITCH (TUNER) (German)			
SW803	1-692-386-21	SWITCH (FM) (US, Canadian, AEP, E)			
SW803	1-692-386-21	SWITCH (SDK) (German)			
SW804	1-692-386-21	SWITCH (CD)			
SW805	1-692-386-21	SWITCH (DSPL)			
SW806	1-692-386-21	SWITCH (SENS)			
SW807	1-692-386-21	SWITCH (BTM)			
SW808	1-572-704-21	SWITCH, KEY BOARD (+)			
SW809	1-572-704-21	SWITCH, KEY BOARD (SEL)			
SW810	1-692-386-21	SWITCH (-)			
SW811	1-572-704-21	SWITCH, KEY BOARD (MUTE)			
SW812	1-572-704-21	SWITCH, KEY BOARD (LOUD)			
SW813	1-692-386-21	SWITCH (OFF)			
SW814	1-692-386-21	SWITCH (⏮/- (AMS/SEEK))			
SW815	1-572-704-21	SWITCH, KEY BOARD (+/⏭ (AMS/SEEK))			
SW816	1-572-704-21	SWITCH, KEY BOARD (1/INTOR)			
SW817	1-572-704-21	SWITCH, KEY BOARD (2/REPEAT)			
SW818	1-572-704-21	SWITCH, KEY BOARD (3/SHUF)			
SW819	1-572-704-21	SWITCH, KEY BOARD (4)			
SW820	1-572-704-21	SWITCH, KEY BOARD (5)			
SW821	1-692-386-21	SWITCH (6)			
SW822	1-572-704-21	SWITCH, KEY BOARD (⏪/- (MANU))			
SW823	1-572-704-21	SWITCH, KEY BOARD (+/⏩ (MANU))			
**********					
*	A-3298-017-A	MAIN BOARD, COMPLETE (German)			
		**********			
*	A-3298-019-A	MAIN BOARD, COMPLETE (E)			
		**********			
*	A-3298-021-A	MAIN BOARD, COMPLETE (AEP)			
		**********			
*	A-3298-023-A	MAIN BOARD, COMPLETE (US, Canadian)			
		**********			
	7-682-547-04	SCREW +PTT 3X6 (S)			
	7-621-770-67	SCREW +PTT 2.6X6 (S)			

Ref. No.	Part No.	Description			Remark
		< CAPACITOR >			
C001	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C101	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C102	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C103	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C104	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C105	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C108	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C109	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C111	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C113	1-163-081-00	CERAMIC CHIP	0.22uF		25V
C114	1-216-295-00	METAL CHIP	0	5%	1/10W
C117	1-126-157-11	ELECT	10uF	20%	16V
C118	1-126-157-11	ELECT	10uF	20%	16V
C120	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C122	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V (US, Canadian)
C122	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V (AEP, E, German)
C123	1-164-346-11	CERAMIC CHIP	1uF		16V
C124	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C125	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C126	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C130	1-136-165-00	FILM	0.1uF	5%	50V
C131	1-136-165-00	FILM	0.1uF	5%	50V
C132	1-136-165-00	FILM	0.1uF	5%	50V
C133	1-136-165-00	FILM	0.1uF	5%	50V
C142	1-162-638-11	CERAMIC CHIP	1uF		16V
C143	1-162-638-11	CERAMIC CHIP	1uF		16V
C150	1-126-288-11	ELECT	4.7uF	20%	16V
C201	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C202	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C203	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C204	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C205	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C208	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C209	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C211	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C213	1-163-081-00	CERAMIC CHIP	0.22uF		25V
C214	1-216-295-00	METAL CHIP	0	5%	1/10W
C217	1-126-157-11	ELECT	10uF	20%	16V
C218	1-126-157-11	ELECT	10uF	20%	16V
C220	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C222	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V (US, Canadian)
C222	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V (AEP, E, German)
C223	1-164-346-11	CERAMIC CHIP	1uF		16V

Ref. No.	Part No.	Description			Remark
C224	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C225	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C226	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C230	1-136-165-00	FILM	0.1uF	5%	50V
C231	1-136-165-00	FILM	0.1uF	5%	50V
C232	1-136-165-00	FILM	0.1uF	5%	50V
C233	1-136-165-00	FILM	0.1uF	5%	50V
C242	1-162-638-11	CERAMIC CHIP	1uF		16V
C243	1-162-638-11	CERAMIC CHIP	1uF		16V
C250	1-126-288-11	ELECT	4.7uF	20%	16V
C300	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C301	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C302	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C303	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C304	1-124-584-00	ELECT	100uF	20%	10V
C305	1-164-346-11	CERAMIC CHIP	1uF		16V
C306	1-124-584-00	ELECT	100uF	20%	10V
C307	1-124-584-00	ELECT	100uF	20%	10V
C308	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C309	1-124-589-11	ELECT	47uF	20%	16V (German)
C310	1-164-222-11	CERAMIC CHIP	0.22uF		16V
C311	1-126-157-11	ELECT	10uF	20%	16V
C312	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C313	1-124-584-00	ELECT	100uF	20%	10V
C314	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C315	1-126-935-11	ELECT	470uF	20%	16V
C316	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C500	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C502	1-126-768-11	ELECT	2200uF	20%	16V
C504	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C505	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C506	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C507	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C508	1-124-584-00	ELECT	100uF	20%	10V
C509	1-124-234-00	ELECT	22uF	20%	16V
C510	1-124-584-00	ELECT	100uF	20%	10V
C511	1-125-701-11	CAP, DOUBLE LAYER			0.047F
C512	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C513	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C514	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C515	1-165-319-11	CERAMIC CHIP	0.1uF		50V (AEP, German)
C516	1-165-319-11	CERAMIC CHIP	0.1uF		50V (AEP, German)
C517	1-165-319-11	CERAMIC CHIP	0.1uF		50V (AEP, German)
C519	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C522	1-163-038-00	CERAMIC CHIP	0.1uF		25V

Ref. No.	Part No.	Description			Remark
C523	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C525	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C526	1-128-057-11	ELECT	330uF	20%	6.3V
C527	1-128-057-11	ELECT	330uF	20%	6.3V
C528	1-127-556-11	ELECT(SOLID)	6.8uF	20%	16V
C531	1-124-234-00	ELECT	22uF	20%	16V
C540	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C541	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C542	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C543	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C550	1-124-589-11	ELECT	47uF	20%	16V
C575	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V (AEP, German)
C576	1-126-301-11	ELECT	1uF	20%	50V
C600	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C601	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C602	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C604	1-163-097-00	CERAMIC CHIP	15PF	5%	50V
C605	1-163-097-00	CERAMIC CHIP	15PF	5%	50V
C606	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C607	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C608	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C609	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C611	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C612	1-136-169-00	FILM	0.22uF	5%	50V
C613	1-130-479-00	MYLAR	0.0047uF	5%	50V
C614	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C617	1-124-589-11	ELECT	47uF	20%	16V
C619	1-124-589-11	ELECT	47uF	20%	16V
C621	1-124-234-00	ELECT	22uF	20%	16V
C626	1-124-589-11	ELECT	47uF	20%	16V
C650	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V (German)
C651	1-136-161-00	FILM	0.047uF	5%	50V (German)
C652	1-136-161-00	FILM	0.047uF	5%	50V (German)
C653	1-163-245-11	CERAMIC CHIP	56PF	5%	50V (German)
C654	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V (German)
C655	1-164-756-11	CERAMIC CHIP	0.0033uF	5%	50V (German)
C656	1-126-288-11	ELECT	4.7uF	20%	16V (German)
C657	1-136-175-00	FILM	0.068uF	5%	50V (German)
C658	1-136-175-00	FILM	0.068uF	5%	50V (German)

MAIN

Ref. No.	Part No.	Description			Remark
C659	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V (German)
C660	1-124-229-00	ELECT	33uF	20%	10V (German)
C661	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V (German)
C662	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V (German)
C663	1-124-589-11	ELECT	47uF	20%	16V (German)
C670	1-163-251-11	CERAMIC CHIP	100PF	5%	50V (German)
C699	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
		< CONNECTOR >			
CNJ51	1-764-424-31	JACK, PIN 2P			
CNJ502	1-764-808-11	JACK (ANT)			
CNP501	1-764-426-11	PLUG, CONNECTOR 15P			
CNP502	1-764-422-11	PLUG, CONNECTOR 12P			
CNP504	1-764-617-11	PIN, CONNECTOR (PC BOARD) 30P			
		< DIODE >			
D001	8-719-901-33	DIODE	1SS133		
D002	8-719-109-53	DIODE	RD2.2ES-B1		
D300	8-719-034-22	DIODE	MA4039-M(QZ)		
D301	8-719-800-76	DIODE	1SS226		
D500	8-719-017-68	DIODE	MA8068H-TX		
D501	8-719-945-59	DIODE	DSA3A4		
D502	8-719-034-98	DIODE	MA4200-M(QZ)		
D505	8-719-034-51	DIODE	MA4068-H(QZ)		
D506	8-719-034-90	DIODE	MA4160-M(QZ)		
D507	8-719-034-42	DIODE	MA4056-M(QZ)		
D508	8-719-977-03	DIODE	DTZ5.6B		
D509	8-719-914-44	DIODE	DAP202K		
D512	8-719-034-42	DIODE	MA4056-M(QZ)		
D513	8-719-034-70	DIODE	MA4110-M(QZ)		
D518	8-719-034-46	DIODE	MA4062-M(QZ)		
D521	8-719-104-34	DIODE	1S2836		
D523	8-719-034-42	DIODE	MA4056-M(QZ)		
D526	8-719-034-50	DIODE	MA4068-M(QZ)		
D529	8-719-034-50	DIODE	MA4068-M(QZ)		
D531	8-719-977-12	DIODE	DTZ6.8B		
D532	8-719-977-12	DIODE	DTZ6.8B		
D533	8-719-420-90	DIODE	MA8051-M		
D550	8-719-801-78	DIODE	1SS184		
D650	8-719-800-76	DIODE	1SS226 (German)		
D655	8-719-404-46	DIODE	MA110 (German)		
D699	8-719-981-59	DIODE	FC805		

Ref. No.	Part No.	Description			Remark
		< IC >			
IC301	8-759-196-57	IC	SM5874AM-ET		
IC302	8-752-063-44	IC	CXA1646Q		
IC303	8-759-160-00	IC	HA13151		
IC304	8-759-100-96	IC	uPC4558G2		
IC306	8-759-100-96	IC	uPC4558G2		
IC501	8-759-258-00	IC	uPD75518GF-166-3B9		
IC502	8-759-167-83	IC	PST600EMT-T1		
IC503	8-759-182-76	IC	BA3910B-V3		
IC552	8-759-932-86	IC	BU4081BF		
IC603	8-759-823-81	IC	LC7216M		
IC650	8-759-998-24	IC	TDA1579T (German)		
		< JUMPER RESISTOR >			
JR001	1-216-295-00	METAL CHIP	0	5%	1/10W
		< COIL >			
L301	1-410-973-11	INDUCTOR	22uH		
L303	1-410-973-11	INDUCTOR	22uH		
L501	1-410-973-11	INDUCTOR	22uH		
L602	1-410-973-11	INDUCTOR	22uH		
		< VARIABLE COIL >			
LV650	1-424-036-21	COIL (FILTER) (German)			
		< TRANSISTOR >			
Q101	8-729-920-21	TRANSISTOR	DTC314TKH04		
Q102	8-729-920-21	TRANSISTOR	DTC314TKH04		
Q201	8-729-920-21	TRANSISTOR	DTC314TKH04		
Q202	8-729-920-21	TRANSISTOR	DTC314TKH04		
Q301	8-729-020-67	TRANSISTOR	XN1A312-TX		
Q500	8-729-209-15	TRANSISTOR	2SD2012		
Q501	8-729-429-92	TRANSISTOR	XN1211		
Q502	8-729-020-67	TRANSISTOR	XN1A312-TX		
Q503	8-729-020-67	TRANSISTOR	XN1A312-TX		
Q504	8-729-422-29	TRANSISTOR	2SD601A-S		
Q511	8-729-106-60	TRANSISTOR	2SB1115A		
Q513	8-729-424-59	TRANSISTOR	UN2212		
Q515	8-729-020-67	TRANSISTOR	XN1A312-TX		
Q517	8-729-424-59	TRANSISTOR	UN2212		
Q519	8-729-424-59	TRANSISTOR	UN2212		
Q520	8-729-019-00	TRANSISTOR	2SD2394-G		
Q521	8-729-422-87	TRANSISTOR	2SB1073-R		
Q522	8-729-422-29	TRANSISTOR	2SD601A-S		
Q523	8-729-424-59	TRANSISTOR	UN2212		
Q524	8-729-402-13	TRANSISTOR	XN1501		
Q550	8-729-421-19	TRANSISTOR	UN2213		

Ref. No.	Part No.	Description			Remark
Q601	8-729-021-94	TRANSISTOR	2SK1657-T1B		
Q605	8-729-424-59	TRANSISTOR	UN2212		
Q650	8-729-421-22	TRANSISTOR	UN2211 (German)		
		< RESISTOR >			
R001	1-249-429-11	CARBON	10K	5%	1/4W
R101	1-216-095-00	METAL CHIP	82K	5%	1/10W
R102	1-216-095-00	METAL CHIP	82K	5%	1/10W
R105	1-216-085-00	METAL CHIP	33K	5%	1/10W
R106	1-216-085-00	METAL CHIP	33K	5%	1/10W
R107	1-216-093-00	METAL CHIP	68K	5%	1/10W
R108	1-216-093-00	METAL CHIP	68K	5%	1/10W
R109	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R110	1-216-073-00	METAL CHIP	10K	5%	1/10W
R111	1-216-065-00	METAL CHIP	4.7K	5%	1/10W (US, Canadian)
R111	1-216-077-00	METAL CHIP	15K	5%	1/10W (AEP, E)
R111	1-216-081-00	METAL CHIP	22K	5%	1/10W (German)
R115	1-216-041-00	METAL CHIP	470	5%	1/10W
R116	1-216-041-00	METAL CHIP	470	5%	1/10W
R117	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R118	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R124	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R125	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R126	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R127	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R128	1-216-075-00	METAL CHIP	12K	5%	1/10W
R129	1-216-075-00	METAL CHIP	12K	5%	1/10W
R130	1-216-077-00	METAL CHIP	15K	5%	1/10W
R131	1-216-077-00	METAL CHIP	15K	5%	1/10W
R132	1-216-129-00	METAL CHIP	2.2M	5%	1/10W
R133	1-216-129-00	METAL CHIP	2.2M	5%	1/10W
R198	1-216-295-00	METAL CHIP	0	5%	1/10W (US, Canadian)
R201	1-216-095-00	METAL CHIP	82K	5%	1/10W
R202	1-216-095-00	METAL CHIP	82K	5%	1/10W
R205	1-216-085-00	METAL CHIP	33K	5%	1/10W
R206	1-216-085-00	METAL CHIP	33K	5%	1/10W
R207	1-216-093-00	METAL CHIP	68K	5%	1/10W
R208	1-216-093-00	METAL CHIP	68K	5%	1/10W
R209	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R210	1-216-073-00	METAL CHIP	10K	5%	1/10W
R211	1-216-065-00	METAL CHIP	4.7K	5%	1/10W (US, Canadian)
R211	1-216-077-00	METAL CHIP	15K	5%	1/10W (AEP, E)
R211	1-216-081-00	METAL CHIP	22K	5%	1/10W (German)
R215	1-216-041-00	METAL CHIP	470	5%	1/10W
R216	1-216-041-00	METAL CHIP	470	5%	1/10W
R217	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R218	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R224	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R225	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R226	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R227	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R228	1-216-075-00	METAL CHIP	12K	5%	1/10W
R229	1-216-075-00	METAL CHIP	12K	5%	1/10W
R230	1-216-077-00	METAL CHIP	15K	5%	1/10W
R231	1-216-077-00	METAL CHIP	15K	5%	1/10W
R232	1-216-129-00	METAL CHIP	2.2M	5%	1/10W
R233	1-216-129-00	METAL CHIP	2.2M	5%	1/10W
R298	1-216-295-00	METAL CHIP	0	5%	1/10W (US, Canadian)
R300	1-216-113-00	METAL CHIP	470K	5%	1/10W
R301	1-216-027-00	METAL CHIP	120	5%	1/10W
R303	1-216-001-00	METAL CHIP	10	5%	1/10W
R304	1-216-001-00	METAL CHIP	10	5%	1/10W
R305	1-216-037-00	METAL CHIP	330	5%	1/10W
R307	1-216-295-00	METAL CHIP	0	5%	1/10W (US, Canadian, AEP, E)
R310	1-216-025-00	METAL CHIP	100	5%	1/10W
R311	1-216-025-00	METAL CHIP	100	5%	1/10W
R312	1-216-025-00	METAL CHIP	100	5%	1/10W
R313	1-216-049-00	METAL CHIP	1K	5%	1/10W
R314	1-216-049-00	METAL CHIP	1K	5%	1/10W
R501	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R502	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R503	1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R504	1-216-105-00	METAL CHIP	220K	5%	1/10W
R505	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R506	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R507	1-216-101-00	METAL CHIP	150K	5%	1/10W
R510	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R511	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R512	1-216-045-00	METAL CHIP	680	5%	1/10W
R516	1-216-097-00	METAL CHIP	100K	5%	1/10W
R517	1-216-097-00	METAL CHIP	100K	5%	1/10W
R518	1-216-073-00	METAL CHIP	10K	5%	1/10W
R519	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R520	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R522	1-216-079-00	METAL CHIP	18K	5%	1/10W
R524	1-216-049-00	METAL CHIP	1K	5%	1/10W
R525	1-216-049-00	METAL CHIP	1K	5%	1/10W
R526	1-216-025-00	METAL CHIP	100	5%	1/10W
R527	1-216-049-00	METAL CHIP	1K	5%	1/10W
R528	1-216-025-00	METAL CHIP	100	5%	1/10W
R529	1-216-025-00	METAL CHIP	100	5%	1/10W
R530	1-216-073-00	METAL CHIP	10K	5%	1/10W

MAIN

Ref. No.	Part No.	Description				Remark
R531	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R534	1-216-051-00	METAL CHIP	1.2K	5%	1/10W	
R535	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R536	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R541	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R542	1-216-105-00	METAL CHIP	220K	5%	1/10W	
R543	1-216-067-00	METAL CHIP	5.6K	5%	1/10W	
R547	1-216-051-00	METAL CHIP	1.2K	5%	1/10W	
R548	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R549	1-216-051-00	METAL CHIP	1.2K	5%	1/10W	
R550	1-216-051-00	METAL CHIP	1.2K	5%	1/10W	
R551	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R552	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R553	1-216-051-00	METAL CHIP	1.2K	5%	1/10W	
R556	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R557	1-216-105-00	METAL CHIP	220K	5%	1/10W	
R559	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R560	1-216-097-00	METAL CHIP	100K	5%	1/10W	(AEP, E)
R561	1-216-097-00	METAL CHIP	100K	5%	1/10W	(German)
R562	1-216-097-00	METAL CHIP	100K	5%	1/10W	(E)
R562	1-216-295-00	METAL CHIP	0	5%	1/10W	(US, Canadian, German)
R563	1-216-097-00	METAL CHIP	100K	5%	1/10W	(German)
R563	1-216-295-00	METAL CHIP	0	5%	1/10W	(US, Canadian, AEP, E)
R571	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R572	1-216-105-00	METAL CHIP	220K	5%	1/10W	
R573	1-216-105-00	METAL CHIP	220K	5%	1/10W	
R582	1-216-105-00	METAL CHIP	220K	5%	1/10W	
R583	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R585	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R586	1-216-051-00	METAL CHIP	1.2K	5%	1/10W	
R588	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R589	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R590	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R591	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R592	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R593	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R594	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R600	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R601	1-216-063-00	METAL CHIP	3.9K	5%	1/10W	
R602	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R603	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R604	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R605	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R606	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R607	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R608	1-216-049-00	METAL CHIP	1K	5%	1/10W	(US, Canadian)
R608	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	(AEP, E)
R608	1-216-063-00	METAL CHIP	3.9K	5%	1/10W	(German)
R609	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R615	1-216-113-00	METAL CHIP	470K	5%	1/10W	
R621	1-216-059-00	METAL CHIP	2.7K	5%	1/10W	
R622	1-216-059-00	METAL CHIP	2.7K	5%	1/10W	
R624	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R625	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R630	1-216-029-00	METAL CHIP	150	5%	1/10W	
R631	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R632	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R650	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	(German)
R651	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	(German)
R652	1-216-067-00	METAL CHIP	5.6K	5%	1/10W	(German)
R653	1-216-067-00	METAL CHIP	5.6K	5%	1/10W	(German)
R654	1-216-116-00	METAL GLAZE	620K	5%	1/10W	(German)
R655	1-216-067-00	METAL CHIP	5.6K	5%	1/10W	(German)
R656	1-216-093-00	METAL CHIP	68K	5%	1/10W	(German)
R657	1-216-089-00	METAL GLAZE	47K	5%	1/10W	(German)
R658	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	(German)
R659	1-216-097-00	METAL CHIP	100K	5%	1/10W	(German)
R660	1-216-117-00	METAL CHIP	680K	5%	1/10W	(German)
R661	1-216-041-00	METAL CHIP	470	5%	1/10W	(German)
R662	1-216-105-00	METAL CHIP	220K	5%	1/10W	(German)
R665	1-216-089-00	METAL GLAZE	47K	5%	1/10W	(German)
R670	1-216-295-00	METAL CHIP	0	5%	1/10W	(US, Canadian, AEP, E)
R999	1-216-295-00	METAL CHIP	0	5%	1/10W	

< VARIABLE RESISTOR >

RV601	1-241-930-21	RES, ADJ, METAL GLAZE 100 (German)

< SWITCH >

SW501	1-571-478-11	SWITCH, SLIDE (POWER SELECT)
SW502	1-572-272-11	SWITCH, SLIDE (CHANNEL SPACE) (E)
SW503	1-571-532-21	SWITCH, TACTIL (RESET)

< THERMISTOR >

TH501	1-806-715-11	THERMISTOR
TH502	1-806-715-11	THERMISTOR

< VIBRATOR >

X301	1-579-280-31	VIBRATOR, CRYSTAL (16.9344MHz)
X501	1-760-096-31	VIBRATOR, CRYSTAL (4.19MHz)
X601	1-577-126-51	VIBRATOR, CRYSTAL (7.2MHz)

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MOTOR | SENSOR | SENSOR FLEXIBLE | SERVO

Ref. No.	Part No.	Description			Remark
*	1-650-144-11	MOTOR BOARD			
		**********			
		< CONNECTOR >			
* CNJ303	1-750-160-21	CONNECTOR, FPC 7P			
		< SWITCH >			
S301	1-572-467-21	SWITCH, PUSH (1 KEY) (LIMIT)			
**********					
	A-3222-525-A	SENSOR BOARD, COMPLETE			
		(Include SENSOR FLEXIBLE BOARD)			
		**********			
		< DIODE >			
D801	8-719-045-75	DIODE CL-200IR-X-TU			
D802	8-719-045-75	DIODE CL-200IR-X-TU			
		< RESISTOR >			
R801	1-216-053-00	METAL CHIP	1.5K	5% 1/10W	
R802	1-216-053-00	METAL CHIP	1.5K	5% 1/10W	
**********					
*	1-650-223-11	SENSOR FLEXIBLE BOARD			
		**********			
		< SWITCH >			
S901	1-692-441-11	SWITCH, MICROPHONE (DISC DET)			
**********					
*	A-3295-950-A	SERVO BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C1	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C2	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C3	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C4	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C5	1-135-166-21	TANTALUM CHIP	47uF	10%	10V
C7	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C8	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C9	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C10	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C11	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C12	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C13	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C14	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C15	1-126-191-11	ELECT	0.47uF	20%	50V
C16	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C17	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C18	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C20	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C21	1-164-346-11	CERAMIC CHIP	1uF		16V
C22	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C23	1-164-346-11	CERAMIC CHIP	1uF		16V
C24	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C25	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C26	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C27	1-135-166-21	TANTALUM CHIP	47uF	10%	10V
C28	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C30	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C31	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C32	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C34	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C35	1-135-166-21	TANTALUM CHIP	47uF	10%	10V
		< CONNECTOR >			
CNJ1	1-565-728-11	CONNECTOR, FPC 17P			
* CNJ2	1-750-159-21	CONNECTOR, FPC 5P			
* CNJ3	1-750-160-21	CONNECTOR, FPC 7P			
CNJ4	1-764-616-21	HOUSING, CONNECTOR (PC BOARD) 30P			
* CNP1	1-580-055-21	PIN, CONNECTOR 2P			
		< IC >			
IC1	8-752-059-30	IC CXA1610M			
IC2	8-752-367-16	IC CXD2515Q			
IC3	8-759-823-87	IC LB1638M			
IC4	8-759-925-72	IC SN74HC02ANS			
IC5	8-759-087-55	IC MPC1732MR2			
IC6	8-759-087-53	IC MPC1730MR2			
		< COIL >			
L1	1-412-058-11	INDUCTOR CHIP	10uH		
L3	1-412-058-11	INDUCTOR CHIP	10uH		
L4	1-412-058-11	INDUCTOR CHIP	10uH		
		< TRANSISTOR >			
Q1	8-729-024-26	PHOTO TRANSISTOR CPT-181S-C-TU			
Q2	8-729-024-26	PHOTO TRANSISTOR CPT-181S-C-TU			
Q5	8-729-141-48	TRANSISTOR 2SB624-BV345			
		< RESISTOR >			
R1	1-216-024-00	METAL GLAZE	91	5% 1/10W	
R2	1-216-001-00	METAL CHIP	10	5% 1/10W	
R4	1-216-077-00	METAL CHIP	15K	5% 1/10W	
R5	1-216-073-00	METAL CHIP	10K	5% 1/10W	
R6	1-216-073-00	METAL CHIP	10K	5% 1/10W	

SERVO

Ref. No.	Part No.	Description			Remark
R7	1-216-099-00	METAL CHIP	120K	5%	1/10W
R8	1-216-081-00	METAL CHIP	22K	5%	1/10W
R9	1-216-075-00	METAL CHIP	12K	5%	1/10W
R10	1-216-075-00	METAL CHIP	12K	5%	1/10W
R11	1-216-083-00	METAL CHIP	27K	5%	1/10W
R12	1-216-077-00	METAL CHIP	15K	5%	1/10W
R13	1-216-077-00	METAL CHIP	15K	5%	1/10W
R14	1-216-097-00	METAL CHIP	100K	5%	1/10W
R15	1-216-085-00	METAL CHIP	33K	5%	1/10W
R16	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R17	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R18	1-216-073-00	METAL CHIP	10K	5%	1/10W
R19	1-216-121-00	METAL CHIP	1M	5%	1/10W
R20	1-216-097-00	METAL CHIP	100K	5%	1/10W
R21	1-216-073-00	METAL CHIP	10K	5%	1/10W
R22	1-216-033-00	METAL CHIP	220	5%	1/10W
R23	1-216-033-00	METAL CHIP	220	5%	1/10W
R24	1-216-033-00	METAL CHIP	220	5%	1/10W
R25	1-216-073-00	METAL CHIP	10K	5%	1/10W
R27	1-216-295-00	METAL CHIP	0	5%	1/10W
R32	1-216-073-00	METAL CHIP	10K	5%	1/10W
		< VARIABLE RESISTOR >			
RV1	1-238-091-11	RES, ADJ, CERMET	22K		
RV2	1-238-091-11	RES, ADJ, CERMET	22K		
		< SWITCH >			
SW1	1-571-754-31	SWITCH, PUSH (1 KEY) (DISC SET)			
		**********			
		MISCELLANEOUS			
		**********			
10	1-765-082-11	CORD (WITH CONNECTOR)			
⚠152	8-848-283-11	DEVICE, OPTICAL KSS-313A			
156	1-646-402-11	MOTOR FLEXIBLE BOARD			
F1	1-533-326-11	FUSE, GLASS TUBE (3A)			
F2	1-533-331-11	FUSE, GLASS TUBE (15A)			
M901	X-3367-484-1	MOTOR (SPINDLE) ASSY			
M902	A-3252-585-A	MOTOR (SL) ASSY (SLED)			
M903	A-3252-580-A	MOTOR (L) ASSY (LOADING)			
S901	1-692-441-11	SWITCH, MICRO (DISC DET)			

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HARDWARE LIST

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#1	7-621-255-25	SCREW +PTT 2X4 (S)
#2	7-621-770-67	SCREW +B 2.6X6
#3	7-621-770-XX	SCREW +PTT 2.6X8 (S)
#4	7-621-771-06	SCREW +B 2X5
#5	7-621-772-08	SCREW +B 2X3
#6	7-621-772-10	SCREW +B 2X4
#7	7-621-772-60	SCREW +B 2X12
#8	7-621-773-95	SCREW +PTT 2.6X6 (S)
#9	7-627-552-07	SCREW, PRECISION +P 1.7X2.5
#10	7-627-552-47	SCREW, PRECISION +P 1.7X4
#11	7-627-553-18	SCREW, PRECISION +P 2X2
#12	7-627-553-27	SCREW, PRECISION +P 2X2.5
#13	7-627-553-37	SCREW, PRECISION +P 2X3
#14	7-627-553-67	SCREW, PRECISION +P 2X5
#16	7-685-105-19	SCREW +P 2X8 TYPE2 NON-SLIT

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ACCESSORIES & PACKING MATERIALS

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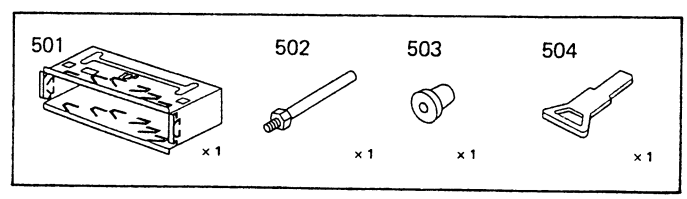
	1-765-082-11	CORD (WITH CONNECTOR)
	3-701-626-01	BAG, POLYETHYLENE
	3-757-146-21	INSTRUCTION, DEALER
	3-758-333-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, GERMAN, ITALIAN) (AEP, German)
	3-758-333-21	MANUAL, INSTRUCTION (ENGLISH, FRENCH) (US, Canadian)
	3-758-333-41	MANUAL, INSTRUCTION (SPANISH, PORTUGUESE, DUTCH, SWEDISH) (AEP)
	3-758-333-51	MANUAL, INSTRUCTION (ENGLISH, SPANISH, CHINESE) (E)
	3-758-334-11	MANUAL, INSTRUCTION, INSTALL (ENGLISH, FRENCH, GERMAN, ITALIAN) (AEP, German)
	3-758-334-21	MANUAL, INSTRUCTION, INSTALL (ENGLISH, FRENCH) (US, Canadian)
	3-758-334-41	MANUAL, INSTRUCTION, INSTALL (SPANISH, PORTUGUESE, DUTCH, SWEDISH) (AEP)
	3-758-334-51	MANUAL, INSTRUCTION, INSTALL (ENGLISH, SPANISH, CHINESE) (E)
*	3-911-561-01	CUSHION (UPPER)
*	3-911-562-01	CUSHION (LOWER)
*	3-911-770-01	INDIVIDUAL CARTON (CDX-5070:US, Canadian, E)
*	3-911-772-01	INDIVIDUAL CARTON (CDX-5070:AEP)
*	3-911-773-01	INDIVIDUAL CARTON (CDX-5072)
	X-3367-795-1	CASE ASSY

****

MOUNTING HARDWARE

****

* 501	X-3366-235-1	FRAME ASSY, FITTING
502	X-3366-405-1	SCREW ASSY (EXP), FITTING
503	3-349-410-01	BUSHING
504	3-388-078-01	KEY



The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

9-959-297-11

Sony Corporation
Mobile Electronics Group

Published by Audio Sector Quality Assurance Dept.

CDX-5070/5072

SONY

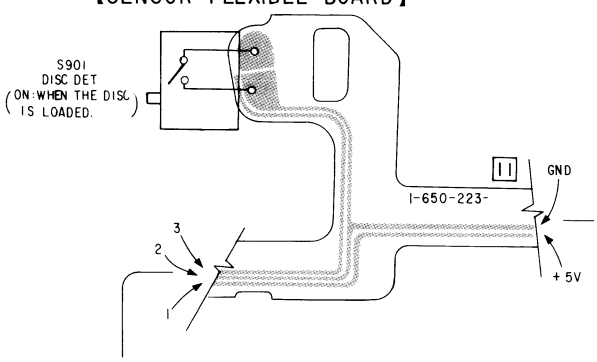
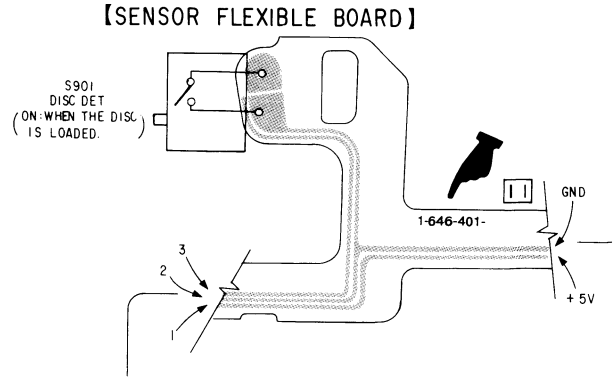
SERVICE MANUAL

US Model
Canadian Model
AEP Model
UK Model
E Model
CDX-5070
German Model
CDX-5072

CORRECTION-1

Correct your service manual as shown below.

☛ : indicates corrected portion.

Page	INCORRECT	CORRECT
20	【SENSOR FLEXIBLE BOARD】 	【SENSOR FLEXIBLE BOARD】 
43	Ref. No. Part No. Description 126 1-164-401-11 SENSOR FLEXIBLE BOARD	Part No. Description 1-646-401-11 SENSOR FLEXIBLE BOARD
51	Ref. No. Part No. Description * 1-650-223-11 SENSOR FLEXIBLE BOARD **********	Part No. Description 1-646-401-11 SENSOR FLEXIBLE BOARD **********

• Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

(SPM-95057)

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Quality Engineering Dept.

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SONY®
SERVICE MANUAL

US Model
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AEP Model
E Model
CDX-5070
German Model
CDX-5072

SUPPLEMENT-1

File this supplement with the service manual.

Subject: • **Mechanism Deck Modification**

(ENG-94008)

The optical pick-up block has been changed from KSS-313A to KSS-410A in the midst of production. According to that the servo board has been modified.
This supplement-1 contains the electrical parts list, the printed wiring boards and the schematic diagram for the new servo board and the exploded views for the new mechanism deck.

1. ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u:μ, for example:
  uA..: μA.. uPA..: μPA..
  uPB..: μPB.. uPC..: μPC.. uPD..: μPD..
- CAPACITORS
  uF: μF
- COILS
  uH: μH

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
*	A-3298-222-A	SERVO BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C1	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C2	1-163-097-00	CERAMIC CHIP	15PF	5%	50V
C3	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C4	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C7	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C8	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C9	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C10	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C11	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C12	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C13	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C14	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C15	1-126-191-11	ELECT	0.47uF	20%	50V
C16	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C17	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C18	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C20	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C21	1-164-346-11	CERAMIC CHIP	1uF		16V
C22	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C23	1-164-346-11	CERAMIC CHIP	1uF		16V
C24	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C25	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C26	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C27	1-135-166-21	TANTALUM CHIP	47uF	10%	10V
C28	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C30	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C31	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C32	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C34	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C35	1-135-166-21	TANTALUM CHIP	47uF	10%	10V

Ref. No.	Part No.	Description			Remark
		< CONNECTOR >			
CNJ1	1-766-491-11	CONNECTOR, FPC 17P			
* CNJ2	1-750-159-21	CONNECTOR, FPC 5P			
* CNJ3	1-750-160-21	CONNECTOR, FPC 7P			
CNJ4	1-764-616-21	HOUSING, CONNECTOR(PC BOARD) 30P			
* CNP1	1-580-055-21	PIN, CONNECTOR 2P			
		< IC >			
IC1	8-752-070-74	IC CXA1571M			
IC2	8-752-351-94	IC CXD2515Q			
IC3	8-759-823-87	IC LB1638M			
IC4	8-759-925-72	IC SN74HC02ANS			
IC5	8-759-087-55	IC MPC1732MR2			
IC6	8-759-087-53	IC MPC1730MR2			
		< COIL >			
L1	1-412-058-11	INDUCTOR CHIP	10uH		
L2	1-412-058-11	INDUCTOR CHIP	10uH		
L3	1-412-058-11	INDUCTOR CHIP	10uH		
		< TRANSISTOR >			
Q1	8-729-024-26	PHOTO TRANSISTOR CPT-181S-C-TU			
Q2	8-729-024-26	PHOTO TRANSISTOR CPT-181S-C-TU			
Q5	8-729-141-48	TRANSISTOR 2SB624-BV345			
		< RESISTOR >			
R1	1-216-024-00	METAL GLAZE	91	5%	1/10W
R2	1-216-001-00	METAL CHIP	10	5%	1/10W
R4	1-216-081-00	METAL CHIP	22K	5%	1/10W
R5	1-216-073-00	METAL CHIP	10K	5%	1/10W
R8	1-216-081-00	METAL CHIP	22K	5%	1/10W
R9	1-216-075-00	METAL CHIP	12K	5%	1/10W
R10	1-216-075-00	METAL CHIP	12K	5%	1/10W
R11	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R12	1-216-077-00	METAL CHIP	15K	5%	1/10W

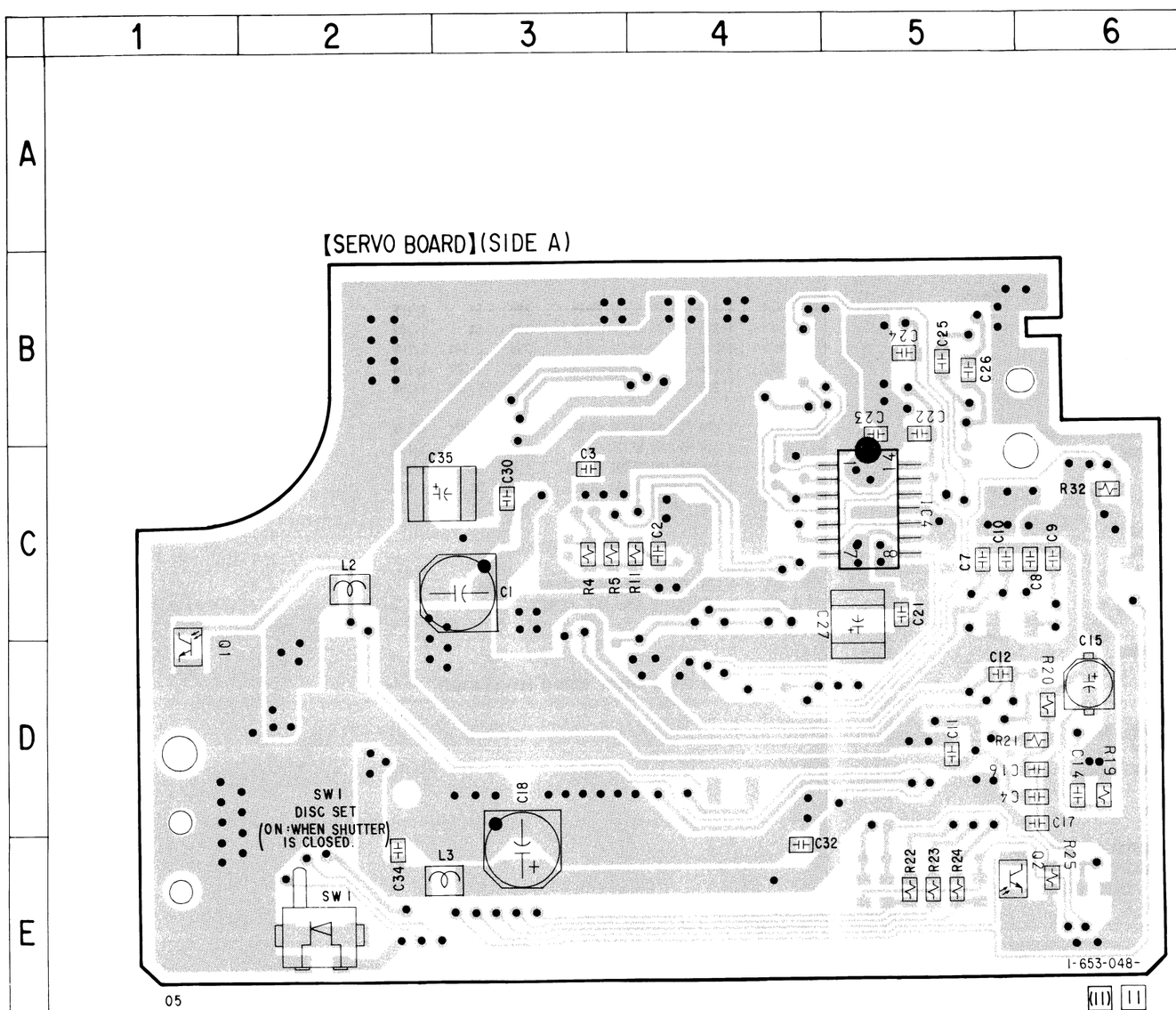
Ref. No.	Part No.	Description			Remark
R13	1-216-077-00	METAL CHIP	15K	5%	1/10W
R14	1-216-097-00	METAL CHIP	100K	5%	1/10W
R15	1-216-085-00	METAL CHIP	33K	5%	1/10W
R16	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R17	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R18	1-216-073-00	METAL CHIP	10K	5%	1/10W
R19	1-216-121-00	METAL CHIP	1M	5%	1/10W
R20	1-216-097-00	METAL CHIP	100K	5%	1/10W
R21	1-216-073-00	METAL CHIP	10K	5%	1/10W
R22	1-216-033-00	METAL CHIP	220	5%	1/10W
R23	1-216-033-00	METAL CHIP	220	5%	1/10W
R24	1-216-033-00	METAL CHIP	220	5%	1/10W
R25	1-216-073-00	METAL CHIP	10K	5%	1/10W
R28	1-216-689-11	METAL CHIP	39K	0.50%	1/10W
R29	1-216-689-11	METAL CHIP	39K	0.50%	1/10W
R30	1-218-758-11	METAL CHIP	180K	0.50%	1/10W
R31	1-218-758-11	METAL CHIP	180K	0.50%	1/10W
R32	1-216-073-00	METAL CHIP	10K	5%	1/10W
R36	1-216-129-00	METAL GLAZE	2.2M	5%	1/10W
R37	1-216-129-00	METAL GLAZE	2.2M	5%	1/10W
R38	1-216-101-00	METAL GLAZE	150K	5%	1/10W
		< VARIABLE RESISTOR >			
RV1	1-238-091-11	RES, ADJ, CERMET	22K		
RV2	1-238-091-11	RES, ADJ, CERMET	22K		
		< SWITCH >			
SW1	1-571-754-31	SWITCH, PUSH (1 KEY) (DISC SET)			

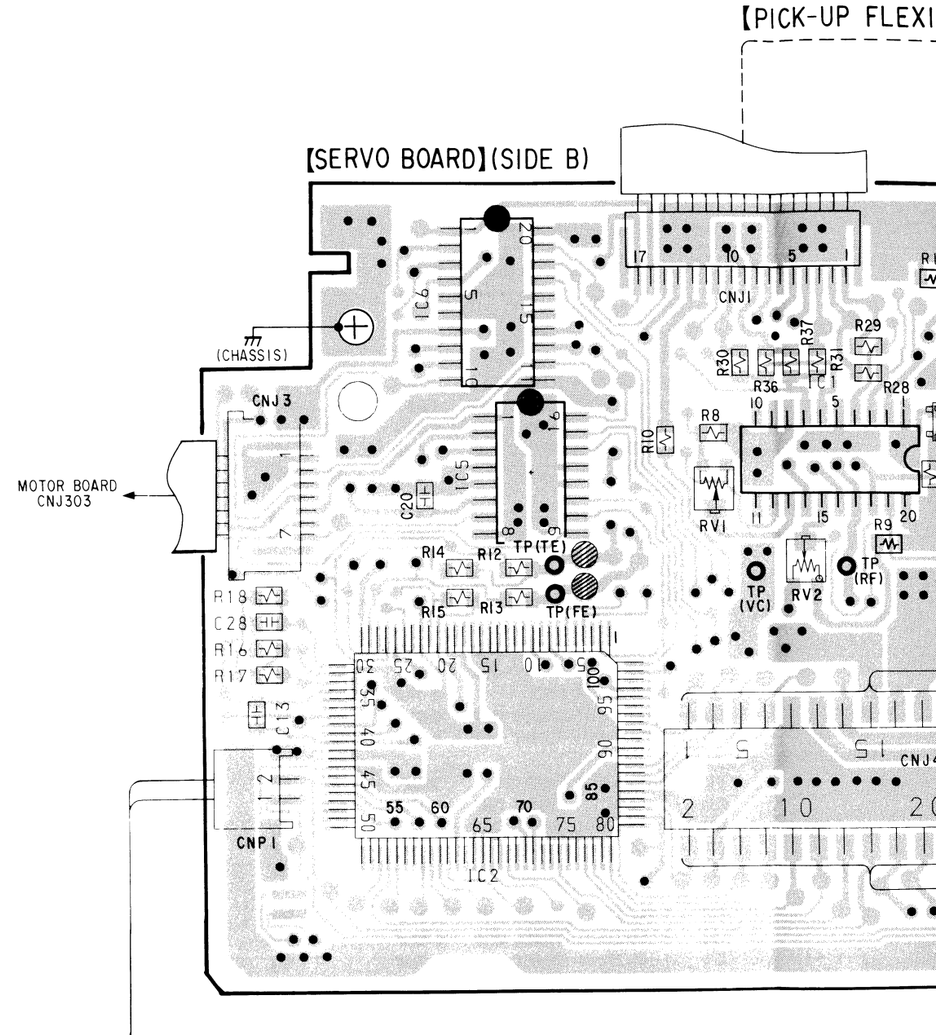
2. DIAGRAMS

2-1. PRINTED WIRING BOARD – MECHANISM DECK Section –

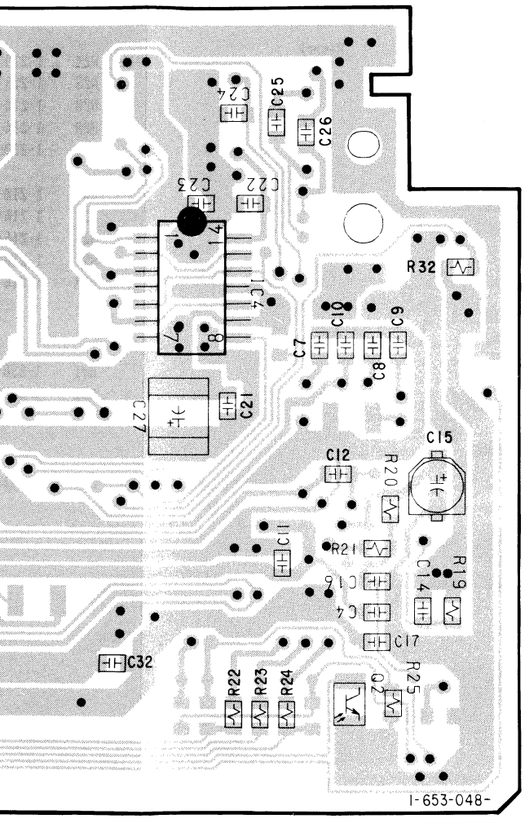
- **Semiconductor Location**

Ref. No.	Location
IC1	C-10
IC2	D-9
IC3	D-12
IC4	C-5
IC5	C-9
IC6	B-9
Q1	D-1
Q2	E-6
Q5	C-11

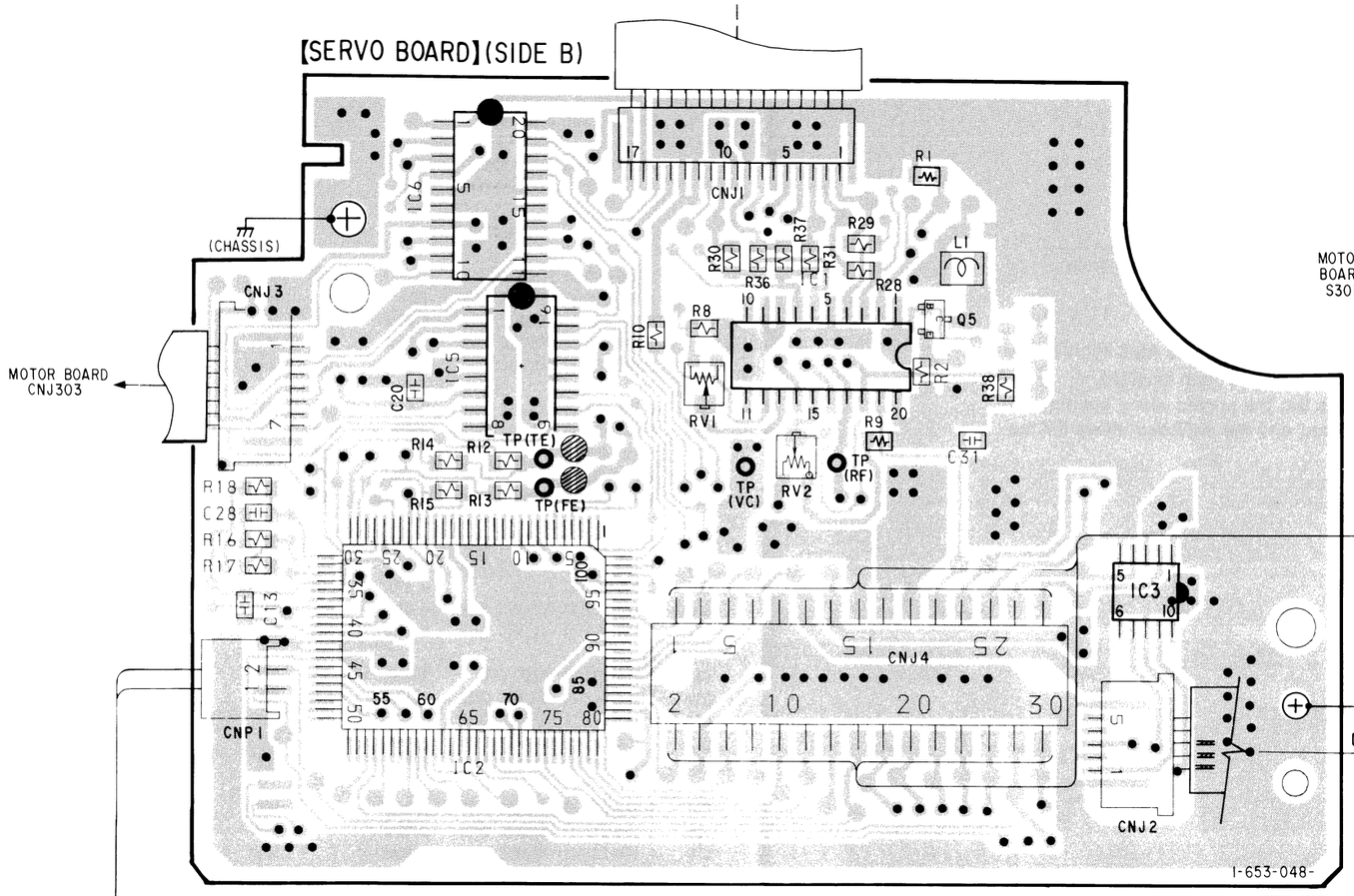


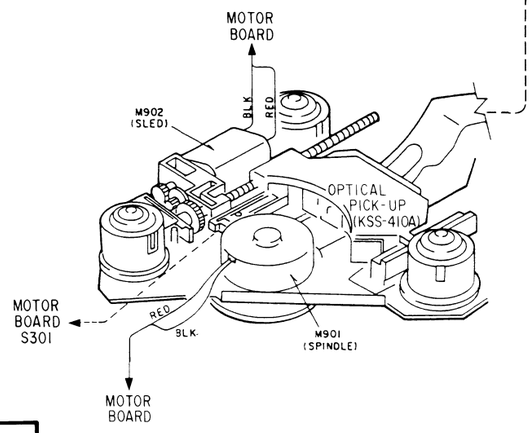


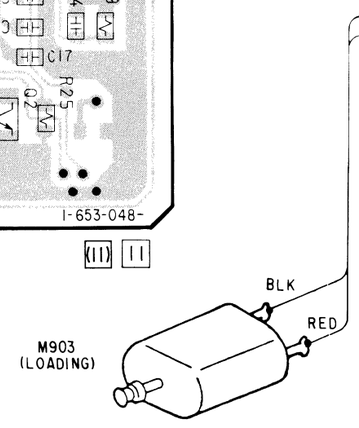
【PICK-UP FLEXIBLE BOARD】 1-652-794-(11)



【SERVO BOARD】(SIDE B)







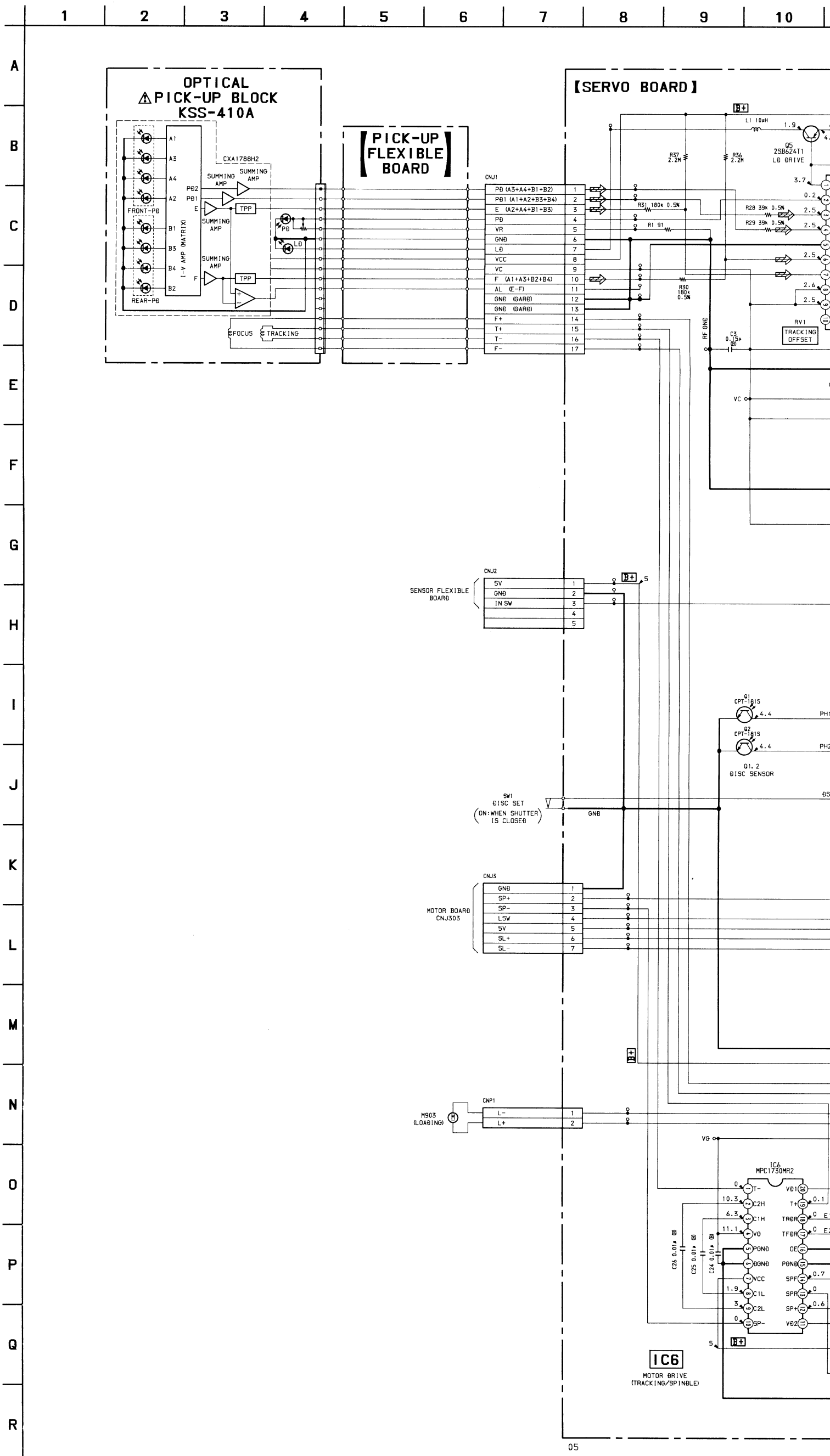
Note:

- ○——— : parts extracted from the component side.
- ● : Through hole.
- : Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

Caution:	
Pattern face side: (SIDE B)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (SIDE A)	Parts on the parts face side seen from the parts face are indicated.

2-2. SCHEMATIC DIAGRAM – MECHANISM DECK Section –



Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- B + : B + Line.
- ▭ : adjustment for repair.
- Power voltage is dc 14.4 V and fed with regulated dc power supply from BATT and ACC terminals.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark : CD PLAY
- Voltages are taken with a VOM (10 MΩ/V).
  Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : CD

【SERVO BOARD】

CNJ1
PD (A3+A4+B1+B2) 1
PD1 (A1+A2+B3+B4) 3
E (A2+A4+B1+B3) 3
PD 4
VR 5
GND 6
LD 7
VCC 8
VC 9
F (A1+A3+B2+B4) 10
AL (E-F) 11
GND (GARD) 12
GND (GARD) 13
F+ 14
T+ 15
T- 16
F- 17

CNJ2
5V 1
GND 2
IN SW 3
4
5

CNJ3
GND 1
SP+ 2
SP- 3
LSW 4
5V 5
SL+ 6
SL- 7

CNP1
L- 1
L+ 2

SW1 DISC SET (ON:WHEN SHUTTER IS CLOSED)

Q1 CPT-181S
Q2 CPT-181S
Q1, 2 DISC SENSOR

IC1 RF AMP, LD-APC ERROR AMP
Q5 2SB624T1 LD DRIVE
CXA1571M

IC2 DIGITAL SIGNAL PROCESSOR, FOCUS, TRACKING/SLED, SPINDLE SERVO
CXD2515Q

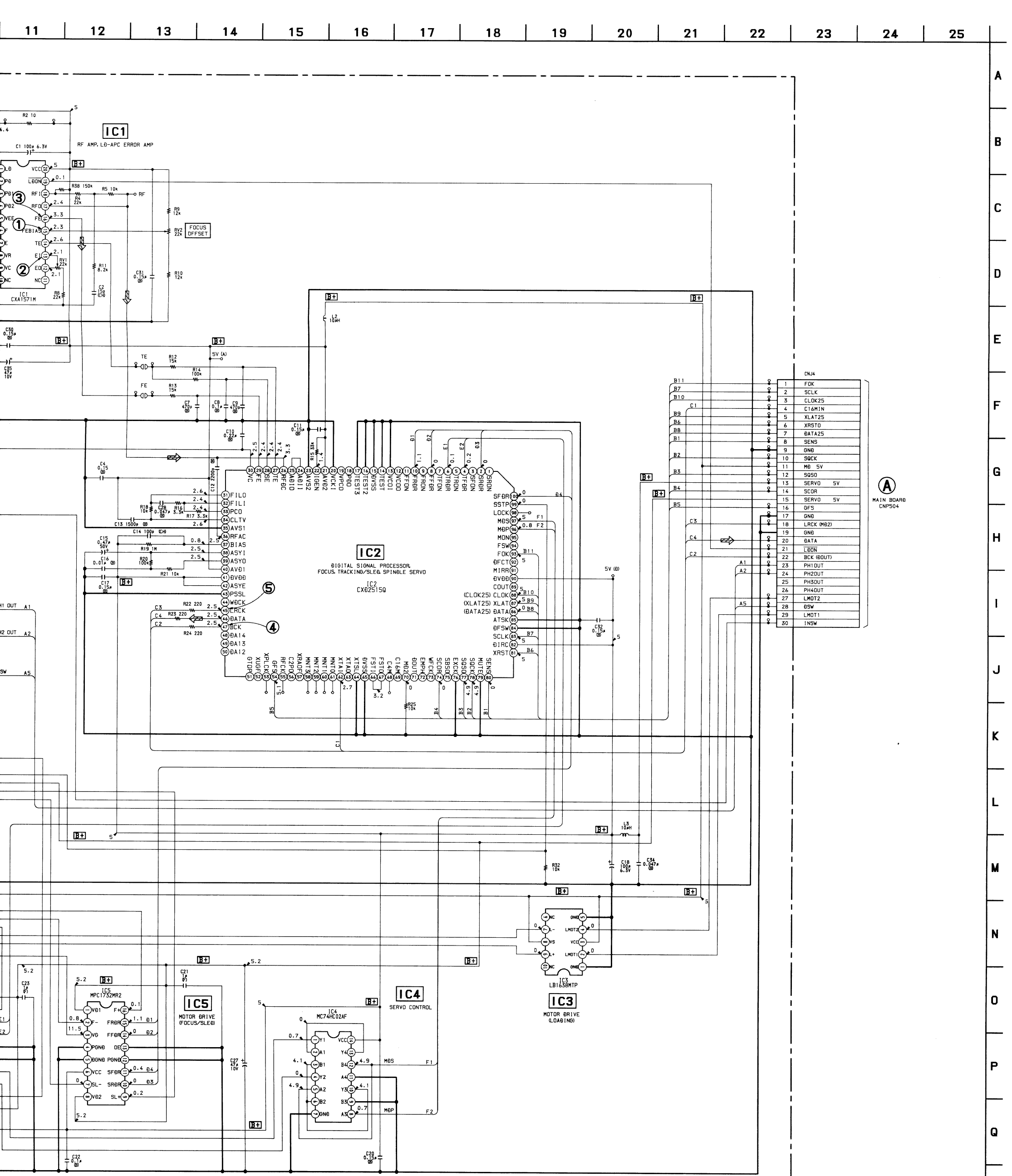
IC3 LB1638MTP MOTOR DRIVE (LOADING)

IC4 MC74HC02AF SERVO CONTROL

IC5 MPC1732MR2 MOTOR DRIVE (FOCUS/SLED)

IC6 MPC1730MR2 MOTOR DRIVE (TRACKING/SPINDLE)

RV1 TRACKING OFFSET
RV2 FOCUS OFFSET


IC1
RF AMP, LØ-APC ERROR AMP
IC1
CXA1571M
IC2
ØIGITAL SIGNAL PROCESSOR,
FOCUS, TRACKING/SLEØ, SPINØLE SERVO
IC2
CXØ2515Q
FOCUS OFFSET
CNJ4
MAIN BOARØ
CNP504
IC3
LB1638MTP
MOTOR ØRIVE
(LOAØING)
IC4
SERVO CONTROL
IC4
MC74HC02AF
IC5
MOTOR ØRIVE
(FOCUS/SLEØ)
IC5
MPC1732MR2
B+
5V (A)
5V (Ø)
FILO
FILI
PCO
CLTV
AVS1
RFAC
BIAS
ASYI
ASYO
AVØ1
ØVØØ
ASYE
PSSL
WØCK
LRCK
ØATA
BCK
ØA14
ØA13
ØA12
SFØR
SSTP
LOCK
MØS
MØP
MON
FSW
FOK
ØFCT
MIRR
ØVØØ
COUT
CLOK
XLAT
ØATA
ATSK
ØFSW
SCLK
ØIRC
XRST
SENS
FOK
SCLK
CLOK25
C16MIN
XLAT25
XRSTO
ØATA25
SENS
GNØ
SQCK
MØ 5V
SQSO
SERVO 5V
SCOR
SERVO 5V
GFS
GNØ
LRCK (MØ2)
GNØ
ØATA
LØØN
BCK (ØOUT)
PH1OUT
PH2OUT
PH3OUT
PH4OUT
LMOT2
ØSW
LMOT1
INSW

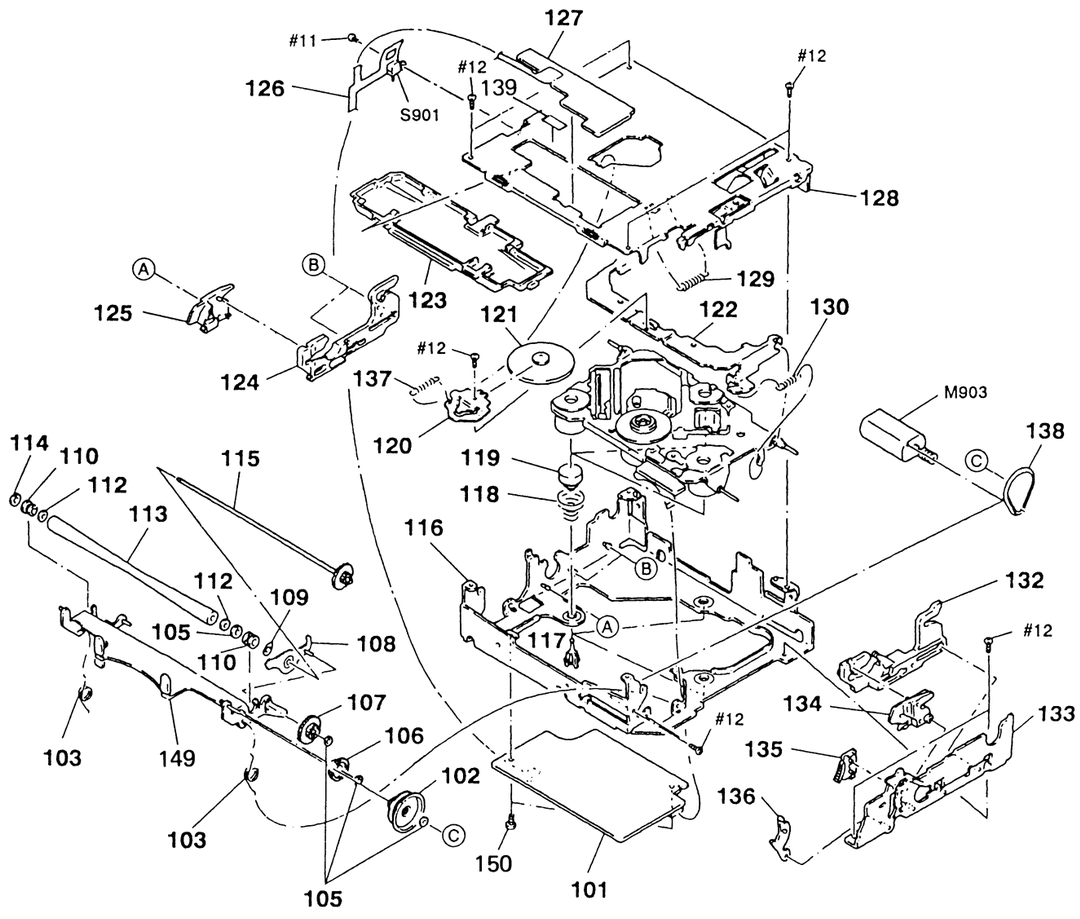
3. EXPLODED VIEWS

NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le neméro spécifié.

(1) MECHANISM DECK SECTION-1 (MG-305X-130)



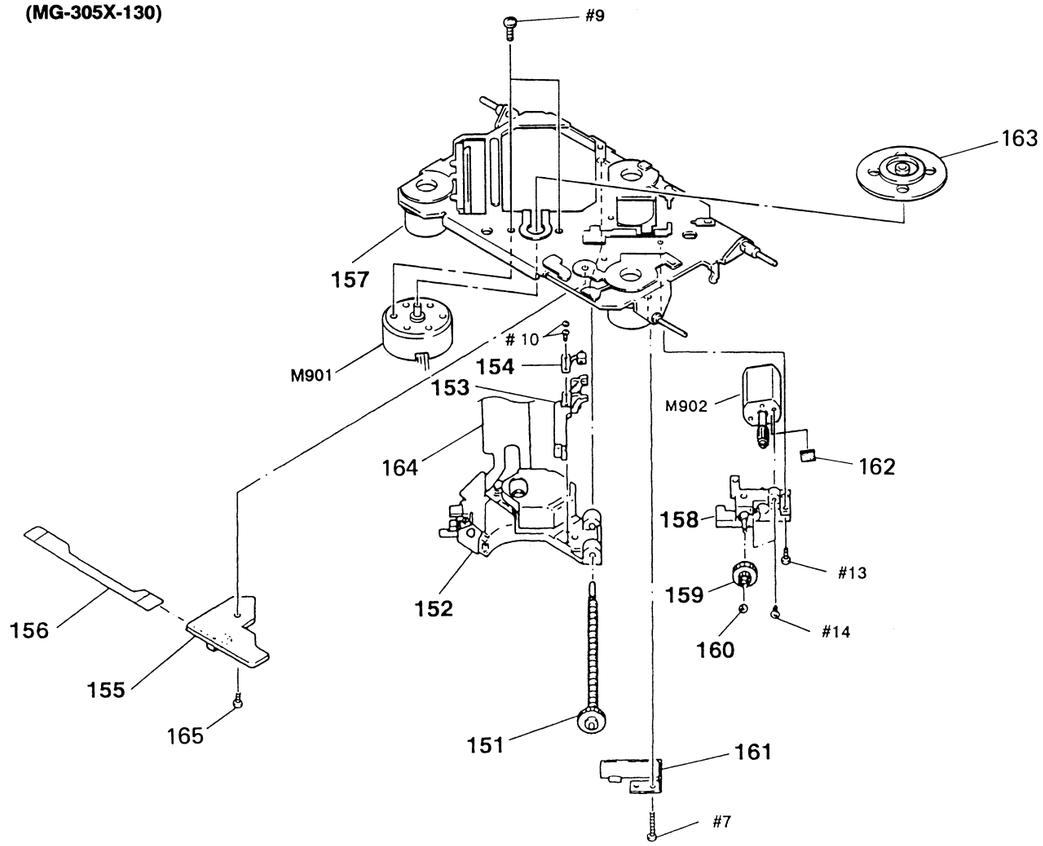
Ref. No.	Part No.	Description	Remark
* 101	A-3298-222-A	SERVO BOARD, COMPLETE	
102	3-384-894-01	GEAR (R1)	
103	3-384-900-01	SPRING (PRESS)	
105	3-578-242-11	WASHER	
106	3-384-895-01	GEAR (R2)	
107	3-384-896-01	GEAR (DOWN)	
108	X-3366-858-4	ARM ASSY, FRICTION	
109	3-384-899-01	SPRING (FRICTION)	
110	3-384-892-01	BEARING (ROLLER)	
112	3-701-438-11	WASHER, 2.5	
113	3-323-231-11	ROLLER (LOWER)	
114	3-386-150-01	RING (ROLLER), RETAINING	
115	A-3252-591-A	GEAR ASSY, ROLLER	
* 116	X-3366-852-1	CHASSIS (M) ASSY	
117	3-384-923-01	SHAFT (DAMPER)	
118	3-384-916-01	SPRING (FL)	
119	3-384-914-01	DAMPER	
* 120	3-384-915-11	BRACKET (CP)	
* 121	3-384-918-01	RETAINER (DISC)	
122	3-384-908-11	ARM, CHUCKING	
* 123	3-906-923-03	GUIDE (DISC 2)	

Ref. No.	Part No.	Description	Remark
124	3-384-888-01	SLIDER (L)	
125	3-384-887-01	LEVER (L)	
126	1-650-223-11	SENSOR FLEXIBLE BOARD	
* 127	A-3222-525-A	SENSOR BOARD, COMPLETE	
* 128	X-3366-854-1	CHASSIS (T) ASSY	
129	3-384-881-02	SPRING (12)	
130	3-384-917-01	SPRING (CH)	
132	X-3366-102-1	SLIDER (R) ASSY	
* 133	X-3366-853-1	CHASSIS (R) ASSY	
134	3-384-889-01	LEVER (R)	
135	3-384-897-01	GEAR (RACK)	
136	3-384-891-01	LEVER (ST)	
137	3-388-331-01	SPRING (T)	
138	3-387-776-01	BELT (L)	
* 139	3-704-132-01	LABEL (K), SELF	
* 149	X-3367-857-1	ARM ASSY, ROLLER	
150	3-918-103-01	SCREW (TOOTH) (+P 2)	
M903	A-3252-580-A	MOTOR (L) ASSY (LOADING)	
S901	1-692-441-11	SWITCH, MICROPHONE (DISC DET)	
#11	7-627-553-18	SCREW, PRECISION +P 2X2	
#12	7-627-553-27	SCREW, PRECISION +P 2X2.5	

Ref. No.	Part No.	Description	Remark
* 101	A-3298-222-A	SERVO BOARD, COMPLETE	
102	3-384-894-01	GEAR (R1)	
103	3-384-900-01	SPRING (PRESS)	
105	3-578-242-11	WASHER	
106	3-384-895-01	GEAR (R2)	
107	3-384-896-01	GEAR (DOWN)	
108	X-3366-858-4	ARM ASSY, FRICTION	
109	3-384-899-01	SPRING (FRICTION)	
110	3-384-892-01	BEARING (ROLLER)	
112	3-701-438-11	WASHER, 2.5	
113	3-323-231-11	ROLLER (LOWER)	
114	3-386-150-01	RING (ROLLER), RETAINING	
115	A-3252-591-A	GEAR ASSY, ROLLER	
* 116	X-3366-852-1	CHASSIS (M) ASSY	
117	3-384-923-01	SHAFT (DAMPER)	
118	3-384-916-01	SPRING (FL)	
119	3-384-914-01	DAMPER	
* 120	3-384-915-11	BRACKET (CP)	
* 121	3-384-918-01	RETAINER (DISC)	
122	3-384-908-11	ARM, CHUCKING	
* 123	3-906-923-03	GUIDE (DISC 2)	

Ref. No.	Part No.	Description	Remark
124	3-384-888-01	SLIDER (L)	
125	3-384-887-01	LEVER (L)	
126	1-650-223-11	SENSOR FLEXIBLE BOARD	
* 127	A-3222-525-A	SENSOR BOARD, COMPLETE	
* 128	X-3366-854-1	CHASSIS (T) ASSY	
129	3-384-881-02	SPRING (12)	
130	3-384-917-01	SPRING (CH)	
132	X-3366-102-1	SLIDER (R) ASSY	
* 133	X-3366-853-1	CHASSIS (R) ASSY	
134	3-384-889-01	LEVER (R)	
135	3-384-897-01	GEAR (RACK)	
136	3-384-891-01	LEVER (ST)	
137	3-388-331-01	SPRING (T)	
138	3-387-776-01	BELT (L)	
* 139	3-704-132-01	LABEL (K), SELF	
* 149	X-3367-857-1	ARM ASSY, ROLLER	
150	3-918-103-01	SCREW (TOOTH) (+P 2)	
M903	A-3252-580-A	MOTOR (L) ASSY (LOADING)	
S901	1-692-441-11	SWITCH, MICROPHONE (DISC DET)	
#11	7-627-553-18	SCREW, PRECISION +P 2X2	
#12	7-627-553-27	SCREW, PRECISION +P 2X2.5	

(2) MECHANISM DECK SECTION-2 (MG-305X-130)



Ref. No.	Part No.	Description	Remark
151	A-3252-586-A	SHAFT (SL) ASSY	
⚠152	8-848-327-11	DEVICE, OPTICAL KSS-410A	
153	3-384-922-01	GEAR (SL FEED)	
154	3-384-920-01	RETAINER (SL FEED)	
* 155	1-650-144-11	MOTOR BOARD	
156	1-646-402-11	MOTOR FLEXIBLE BOARD	
* 157	X-3366-855-1	CHASSIS (OPT) ASSY (OUTSERT)	
158	X-3366-100-1	BASE (DRIVING) ASSY	
159	3-384-912-01	GEAR (K2)	
160	3-570-615-00	POLY-WASHER (DIA. 1.2)	
161	3-384-913-11	SPRING (THRUST RETAINER)	

Ref. No.	Part No.	Description	Remark
* 162	3-920-313-01	CUSHION (SL)	
163	3-918-062-01	TABLE, DISC	
164	1-652-794-11	PC BOARD, PICKUP FLEXIBLE	
165	3-918-103-01	SCREW (TOOTH) (+P 2)	
M901	X-3367-484-1	MOTOR (SPINDLE) ASSY	
M902	A-3252-585-A	MOTOR (SL) ASSY (SLED)	
#7	7-621-772-60	SCREW +B 2X12	
#9	7-627-552-07	SCREW, PRECISION +P 1.7X2.5	
#10	7-627-552-47	SCREW, PRECISION +P 1.7X4	
#13	7-627-553-37	SCREW, PRECISION +P 2X3	
#14	7-627-553-67	SCREW, PRECISION +P 2X5	

Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le neméro spécifié.

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